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ORIGINAL LECTURES.

CHRONIC DISEASE OF THE ANKLE-JOINT.

A Clinical Lecture delivered at the Bellevue Hospital, New York.

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(Specially reported for THE MEDICAL NEWS by EDWARD DEVELIN.)

GENTLEMEN: To-day I would specially call your attention to disease of the ankle-joint.

A few days ago a gentleman brought this little boy to me suffering from this disease; I requested him to bring him here to-day, in order that I may show you the means of relief by instrumental aid. On the following day another case was brought to me, the disease in this instance being in a much more advanced stage; this case I will present to you also.

Disease of the ankle is one of the most serious forms of joint disease, arising frequently from very slight causes, so slight that the disease does not develop sufficient importance to attract particular attention, until many weeks, and in some cases months, have elapsed; by this time the disease is fully developed and has caused serious constitutional disturbance; the medical man then being called in is apt to consider the disease at the joint caused by some strumous disease. This mistake has been made both at home and abroad in relation to chronic disease of the ankle-joint. They are made chronic simply because they have such a slight origin, and in course of time if allowed to run on destroy the joint and sometimes the life of the patient.

CASE I.—This child first sustained its injury by the foot slipping from the rung of a chair, the foot by some means being caught and the ankle twisted. Now observe what takes place here; the base of the tibia rests upon the astragalus and on either side are the internal and external malleoli, so that the ankle-joint is a perfect ginglymoid joint, there being no lateral motion; now between the base of the tibia and the astragalus is a thick cartilage for the purpose of receiving concussion; there is exactly the same on either side between the astragalus and malleoli, but here the cartilage is not so thick, as there is no necessity for it; around these bones passes the synovial membrane. Now when the foot is twisted to the side, the pressure may be so severe upon the thinner portion of the encrusting cartilage as to produce an extravasation of blood, and hence the nidus of this disease. There may be no swelling or heat at the joint take place at the time, and apparently there is nothing in particular that would call for attention, but in about two or three days the joint becomes a little stiff and in the course of a week or more there is a low grade of inflammation set up, an effusion is then poured out into all the little sulci of the joint, and you have a shapeless, boggy, fluctuating tumor. If then you take the foot and attempt to flex it, the child will scream with the pain caused by this action; the gastrocnemius having its attachment upon the os calcis, then draws the heel up and gives us the deformity known as talipes equinus. Now as I take the foot and make extension in the line of the deformity, you observe the expression of relief that is shown in the countenance of this child, and by continuing this extension I am enabled to make slight motion within the joint without causing pain. Now how will you form your diagnosis? You want to know whether the disease is in the joint or whether it is in the ligaments exterior to the joint. If it has been wrenched, pulled, or strained in such a manner that the ligaments have been severely stretched or partially torn, then the disease will commence in the ligaments. If, on the contrary, concussion has been the cause of the trouble, then the disease will have commenced in the interior of the joint.

Now, if the disease be in the joint, pressure of the foot upon the base of the tibia will aggravate the pain intensely; it is, however, necessary to make this pressure upon all parts; you may, perhaps, press upward and you get no pain; then press out on either side of the astragalus in order to bring the sides of this bone against the malleoli; so make your pressure on all sides to bring all parts of the joint into contact. Now if, on the contrary, you get a release from pain by pressure, and upon extension you get more pain, then the disease is in the ligaments; by this simple plan you can diagnosticate your case.

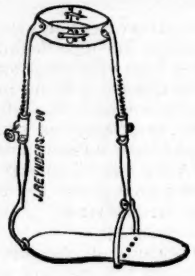
In the very early stage of the disease you will find slight swelling and slight increase of temperature of the parts, but in some cases the increase of temperature is not perceptible to the sensibility of the touch; in such cases use Seguin's surface thermometer; by this means you can detect the exact point of the disease, and secure an accurate registration of temperature.

Treatment.—In the first stage, in all sprains or injuries of a like nature, dip the foot in hot water, as hot as the patient can bear it; then every few minutes add a little more water still hotter, and so on until your patient may perhaps be able to bear it at 120° F., so hot, indeed, that he cannot bear that amount of heat with the other foot if put in the water at once; this will remove the pain almost entirely; this should be continued without intermission for six or eight hours, or until the parts can bear pressure without pain; if you will do this at the outset, you will save yourself much trouble and the patient many months of pain. After you have accomplished this, take a roller bandage and commence to bandage the foot at the distal extremity, in order to drive the blood before you, and never under any circumstances make a turn of the bandage tighter above than below, but keep equable pressure on all parts and thus avoid strangulation.

The mother, in this case, took this child to a medical gentleman, although at that time she states there were no external appearances of disease of the joint; the doctor, however, applied the plaster-of-Paris bandage, and the result is as you see; it did not arrest the disease, notwithstanding it was immovably secured in the plaster bandage, and this, although preventing motion in the joint, has not prevented the pressure of the articular surfaces together within the joint; this being the natural result of reflex muscular action, and hence the application of the plaster-of-Paris bandage is inappropriate in such cases.

When this child was brought to me the joint was much larger than it is now: pressure upon the heel or the least attempt to flex the foot produced intense agony. I advised the application of *cold*-water bandages, which have considerably reduced the swelling and inflammation. I have here a small instrument by which I shall now secure my extension and counter-

extension. This consists of a small steel foot-plate with an anterior and posterior rod attached above to a small collar which passes around the leg just below the knee; these rods being composed of two bars sliding upon each other, are regulated by a ratchet and key (see Fig.).



Now in applying this instrument I first fold a small piece of cloth, and lay it upon the foot-plate, for the purpose of absorbing all moisture, then passing this under the foot, I bring a strip of adhesive plaster from the heel of the instrument over the instep; I then secure the sole of the foot to the instrument by smaller bands of plaster passing across the foot, as you observe. I now take a strip of the plaster and pass it around the heel, bringing the two ends forward, which I pass around the sides of this small steel arch of the instrument which supports the anterior rod; then drawing the heel well forward, I reverse the ends of the plaster upon itself. Having now secured the foot in this manner, I now apply a roller bandage, securing equable pressure upon all parts of the foot. We now take long strips of adhesive plaster and pass them up the leg from just above the ankle-joint, taking care that they are not brought too close to the erosion which you observe at that point; then apply a roller bandage firmly around the leg, and having done this, attach the collar of the instrument, putting underneath at the anterior portion two small pads to protect the tibia from undue pressure; now reverse the ends of the adhesive plaster over this collar, and in turn secure them with a few turns of the roller; and now, having accomplished this, we are prepared to make extension and counter-extension. You will observe that all this time I have left the *ankle-joint exposed;* we can now make our extension, this being gradually effected, first at the heel, then at the toes, until the foot is brought at a right angle to the leg, and the requisite extension secured; at which point the child is free from pain, the articular surfaces being removed from each other. In this case I am compelled to use quite a little force, as the gastrocnemius is rigidly contracted, but I use the force gently and gradually: never use violence with an inflamed muscle. I have now completed my extension, and, as you observe, have left the ankle-joint exposed. Now were I to let it remain in that condition, I should leave the joint open to extravasation of blood, and I might do the child more harm than had I let him alone. I therefore take these strips of adhesive plaster and draw them around the joint as tightly as I can. I then apply this roller bandage and draw equally as tight, and by this pressure I expect to promote absorption of the exudation in the joint. In placing the shoe upon the foot, cut the shoe open behind and in front to admit the rods, then putting in eyelets, lace them behind the rods; in this manner the shoe is applied neatly and comfortably.

This child can now run around in the open air to improve his general condition; at the same time he should be properly nourished.

CASE II. *Chronic Disease of Ankle-joint.*—This little fellow was brought to me two days ago suffering from the same disease, but in a more aggravated form. His difficulty arose from an injury received at the ankle by falling down some eight or more steps. When I saw him the ankle was swelled to such an extent that I was afraid it would burst; I immediately ordered the application of a cold-water sponge compress, which was faithfully applied, and I am pleased to notice the improved condition of the joint. I will make extension of the joint here, and while retaining it in that position apply the sponge compress; this should be firmly and snugly secured, and then, having done that, dip the foot in water; the water being absorbed by the sponge, causes additional pressure upon the joint, and by this means favors absorption of the exudate.

When this disease has been further reduced I shall apply the extension and counter-extension by the same means as in the previous case.

CASE III. *Clubfoot, Talipes Equino-varus.*—I have here a little child suffering from club-foot, and I take this opportunity of drawing your attention to this point, that when performing the operation of tenotomy you secure a proper instrument with which to sever the tissues. I omitted to bring my own tenotome with me, and the house surgeon has just handed me this one, which, you observe, has a sharp point. I consider that any man using this incurs a great risk. I would not use this instrument under any consideration, and yet I consider that I can cut a tendon without injuring the vessels that may be in proximity to it as well as any one, but with all of my practical knowledge I would not undertake to use this tenotome. You will find this instrument in the shop of almost every surgical instrument maker, but it is not fit to use in the operation of tenotomy. (Dr. S. having sent to his office for his tenotome, it was now handed to him.)

The tenotome which I use, you will observe, is curved and round-pointed, and thus you can avoid injury to the vessels while performing the operation. The child now before us is suffering from the form of talipes known as talipes equino-varus; this condition in this case is congenital. I will now endeavor to bring the foot into the normal position by section of both the tendo Achillis and plantar fascia. You will observe that, as my assistant brings these muscles upon the stretch, I make point pressure upon each one, and instantly there is produced a reflex spasm of these muscles, thus indicating that they must be severed before any satisfactory result can be obtained. I will first divide the plantar fascia, and here you will observe that I pass the blade of the knife under the contractured tendon and fascia, with the blade lying flat against them. Having now inserted it to the desired point, I turn the edge towards the fascia, and with a short sawing motion, and with firm pressure of my thumb upon the stretched tissues, I have completely severed the plantar fascia. I then instantly return the blade to the flat position and withdraw it, placing my thumb over the wound, as I do so to prevent the entrance of air; it is then hermetically sealed with a strip of adhesive plaster. I will now sever the tendo Achillis in precisely the same manner (the tendo Achillis was then severed). Having now secured both tendons and closed the wounds, we take this small piece of board, which is the width of the foot and extends a little beyond the toes, having at its anterior end a broad strip of adhesive plaster; you also observe that there are one posterior and two lateral strips of the plaster, the board being well padded, as is my usual custom. This we now secure firmly to the foot by means of the plaster strips, and taking this roller bandage bind it firmly around the foot, passing gradually up the leg; but you will here take notice that I

have secured a strip of adhesive plaster passing from the sole of the foot to the outer side of the leg up to the knee, in order to evert the foot and retain it in its normal position, while from the anterior portion of the foot passes this broad band of adhesive plaster up to the leg, and which secures the foot at right angles, these strips in turn being securely held by the roller bandage. In this case I shall extend my bandage up to the thigh, the child being so small.

This is the entire treatment of tenotomy in these cases of clubfoot. You have seen that I place the foot in its normal position immediately after section of the tendons, and to this I especially call your attention; other authorities, after having severed the tendons, bind the foot up in its deformed position, and after the wound has healed, commence gradual traction upon the severed tendons and endeavor to restore the foot to its normal position by this means; that is the essential difference in my mode of treatment.

After I have restored the foot to its normal position, the exudation from the severed muscles forms a connection between the two cut surfaces and which binds them firmly together, and in this manner I secure a useful and contractile muscle and without causing the slightest pain. On the other hand, were I to make traction upon the new growth, the pain would be so severe that I should have to desist, or, were I to restore the foot to its normal position, I should have so strained the new growth between the two cut surfaces as to render it perfectly useless, had I not torn it asunder in making the traction. I have followed this plan of treatment for upwards of twenty years and have secured the most successful and satisfactory results from the same. I will bring this child again before you in order that you may fully verify my method of treatment.

Note 1.—A week has now elapsed since the operation upon this child for talipes equino-varus. The mother now informs us the patient has not suffered in any manner from the operation; sleeping well at night and making no complaint during the day. Before removing the dressing, you will observe the toes of the foot retain their natural color, showing that the dressing was not applied too tightly. We will now remove the dressing and note the result of the operation (dressing was then removed). You can here notice that the foot is at right angles and the wounds completely healed. By pinching the gastrocnemius, I secure such contraction of the muscle as to raise the heel, showing that union has taken place between the severed ends of the tendo Achillis. I will now reapply the dressing as before. I wish, however, to call your attention to this point; before applying the bandage, bring the foot to a right angle so that your pressure may be adapted to the vessels of the foot at the angle at which you wish to retain it; by this means you avoid the constriction you would be liable to incur if the foot were flexed after the bandage was applied. In these small children, remember to let the bandage extend up upon the thigh. You will observe that I pass a strip of bandage from the sole of the foot to the outer part of the leg, in order to guide the foot in the direction I desire it to retain. The child can now wear this bandage for some few weeks, or until the parts have become thoroughly organized and can bear the weight of the body; then, if necessary, mechanical treatment can be applied.

Note 2.—The following week the bandage was again removed. On removing the bandage I find no sloughing here whatever, and the wound, as you observe, is entirely closed, the foot is at right angles, and there is no deformity whatever. The only difficulty now is the weakness of the muscles, but that can be remedied by the following method. This boy is now in a condition for the application of my clubfoot shoe. This shoe has in the sole a hinge capable of flexion, extension, inversion, and eversion; to a certain degree this is regulated by elastic bands, which can be so arranged as to flex or evert the foot in the desired position but not so strongly as to prevent the foot being moved in the opposite direction at the will of the patient.

Having now performed the operative part of the treatment, we require to restore vitality to the muscles and retain the foot in the normal position; now in this case, all that is required is to furnish the foot with artificial muscles to evert it and bring it to a right angle, and these are supplied in the mechanism of the shoe the boy will now wear. In the summer-time he can run around barefoot and thus aid in strengthening and restoring vitality to the muscles.

CASE IV. *Talipes Varus.*—I here present to you this young girl, eighteen years of age, suffering from talipes varus in its worst possible form; in this case it is congenital. Upon putting the tendo Achillis and plantar fascia upon the stretch, and making point pressure, you here observe I get a reflex spasm.

The tendo Achillis has been divided twice previously, but the plantar fascia has been neglected; the first operation was performed when she was three months old, and the second division was made when she was about three years of age. At both operations the foot was bandaged in its deformed position instead of bringing it into the normal position at the time the operation was performed. After the wound was healed traction was made upon the severed muscle to endeavor to bring the foot to a more natural position, but the pain was so intense that it had to be abandoned, and the result is as you now see—one of the worst forms of deformity, the foot being turned in at a complete right angle. Now at the first operation, had the plantar fascia and tendo Achillis both been severed, and the foot restored to the normal position immediately, as you saw me recently treat that little child, this young girl would have been enabled to walk with grace and ease, and could have been cured without deformity; whereas at the present time she is now compelled to walk upon the external malleolus of this left foot, and the pain of walking on this unnatural support, even for a short time, will confine her to the house for some days after, rendering the limb perfectly useless as a means of locomotion.

I find here a dislocation of the scaphoid bone; the question now arises whether by dividing the plantar fascia, I can reduce that dislocation? You observe that there is a reflex spasm upon point pressure being made upon this fascia, showing the necessity of section before anything can be done; then would arise another question as to whether, after section has been made, I can restore the foot to its normal position without making exsection of the bone itself, and taking out a V-shaped piece; in many cases that has to be done. Since Mr. Lister's day, we can perform this operation with impunity; we can take out a V-section of the metatarsal bones and secure union without the formation of a single drop of pus. Now this may seem strange, but it is a fact, and has been done since Mr. Lister's antiseptic treatment has been introduced. I look upon this antiseptic mode of treatment as one of the greatest successes in our surgery of the present day. If that could not be done, then comes the question of amputation, but I would not resort to amputation until I had tried all other means. At present, the patient is not in a condition for an operation; there is a bursa here at the external malleolus, which is very much inflamed, and were I to operate now, it might be followed by disastrous results; I shall therefore advise her to avoid using the foot for a time, keeping cold-water applications upon this bursa, and upon her return to me, I will divide both the tendo Achillis and plantar fascia, and if it is necessary to make a V-section of the bone,

I will do so, as I think it will be vastly better to perform this operation. If amputation should after all be decided upon, I should prefer a modification of Simes' operation by Prof. Bryant, and that is, to saw through the condyles, and also the os calcis, then bring these surfaces together, having the posterior portion of the os calcis in the flap, which would make an excellent and desirable support for the limb.

ORIGINAL ARTICLES.

THE DIAGNOSIS OF CONSUMPTION BY MEANS OF THE MICROSCOPE.

BY H. GRADLE, M.D., AND H. WOLTMANN, M.D., OF CHICAGO.

(*Read before the Chicago Medical Society, Jan. 8, 1883.*)

THE subject which we wish to bring to the notice of the Society to-night is the recognition of pulmonary tuberculosis by examination of the sputum. The microscope can, of course, decide the tubercular origin of a sputum only, if the latter contains some characteristic structural element never found under other circumstances. Such a pathognomonic constituent is the *Bacillus tuberculosis*, recently described by Koch. This observer, now well recognized as the foremost investigator of bacteria, has found in all tubercles a well-characterized parasite, which he has never encountered in any other healthy or morbid tissues.

Though it is to be presumed that the profession is now quite familiar with Koch's investigations, it may be best to point out once more the salient points of his discovery, preliminary to our further remarks. The bacillus tuberculosis, as Koch describes it, is a delicate rod, one-third or half as long as a human red-blood corpuscle, characterized not only by its shape and dimensions, but much more so by its behavior to staining agents, for the ordinary mode of aniline staining fails entirely to demonstrate its presence. It is only by a more complicated procedure, devised by Koch, that it can be colored at all, and hence recognized. Since this staining method was original with Koch, and since the unstained parasite does not attract the attention, on account of its faint outlines, we have a sufficient explanation why no one has seen it with certainty prior to Koch. The claim of this observer regarding the connection of this parasite with tuberculosis, is based on the examination of 11 cases of miliary tuberculosis, 12 of caseous pneumonia, 1 of tubercular tumor of the brain, 2 of intestinal tuberculosis, 3 of scrofulous glands, and 4 cases of fungous inflammation of joints in man. Besides this, he examined numerous cases of pearl-disease in cattle, a number of instances of spontaneous tuberculosis in animals, and no less than 200 animal victims which had been inoculated with tuberculous material. Amongst this overwhelming array of material he did not fail in a single instance in finding this particular parasite, whereas he could *not* discover it in any other morbid products.

The coincidence of this micro-organism with tuberculosis would not alone prove its causal relation to that disease. This proof, however, Koch *has* furnished by producing tuberculosis in numerous animals *invariably* by inoculating them with the isolated bacillus. It was well known previously that the infection with tubercular material produces tuberculosis in animals, but Koch was the first to show that this result could be obtained *with absolute certainty* with the bacilli alone freed from all adherent animal substances. This parasite, unlike the bacteria of putrefaction, will not grow in the solutions commonly used for bacterial cultivation. It could be cultivated only on the surface of solidified blood serum, at a temperature ranging from 30° C. to 41° C. On this surface it forms brittle, scaly masses, growing very slowly, and presenting a characteristic appearance. All the characteristic properties of the parasite remained unchanged, no matter how long it was cultivated on this artificial surface, or how often it was transferred to a fresh soil. Inoculation of animals with the parasite cultivated in eight successive generations gave the same results as infection with the original tubercular matter. To any one familiar with bacterial investigations, the proofs furnished by Koch of the parasitic origin of tuberculosis cannot but appear as positive as any experimental results can be without mathematical verification.

But as yet this entire doctrine regarding the etiology of tuberculosis rests upon Koch's assertions; backed, however, by his unrivalled reputation for accuracy. His publications are too recent to have received much confirmation, though Korab in France, and Sternberg in this country, have made short communications corroborative of Koch's experiments. The mere fact, however, that Koch's bacillus is present in all tuberculous products can be readily confirmed by any one endowed with sufficient patience. Ehrlich was the first to show that this parasite is always found in tuberculous sputum, and not in the expectoration of non-tubercular patients. He based his paper on the examination of twenty-six tubercular cases by means of a method of staining more convenient than the original one of Koch. Subsequently Gibbes modified Ehrlich's method slightly, and published further results corroborative of Ehrlich. The latest publication is that of Balmer and Fraentzel in the *Berliner klinische Wochenschrift* (No. 45, 1882), who never failed to find the parasite in the sputa of 120 phthisical patients, without ever detecting it in other diseases.

But Koch has also met with opposition on the part of Dr. Formad and Dr. Schmidt. The former relates some interesting observations on the minute anatomy of tubercular patients (*Philadelphia Medical Times*, November 18, 1882). If his assertions are fully sustained by a more detailed description of his researches than he has yet given, they will form a most valuable contribution to the pathology of tuberculosis. In fact, they would furnish us with an anatomical basis for the predisposition to that disease. For it has always been known, that not *all* human individuals and not all species of animals are equally susceptible to tubercular infection. But Formad takes this opportunity to attack Koch's conclusions as to the parasitic origin of the disease without disproving a single one of Koch's

facts. In his own statements there is no evidence that he has made any personal observations on the presence or the significance of the bacillus tuberculosis. Although he has discovered some conditions said to exist in all subjects predisposed to tuberculosis, he has not proven that these conditions alone can bring on the disease. Nor has he shown that the disease ever occurs without the presence of the parasite in question. But, he says, tuberculosis can and does occur in subjects predisposed to it, from inoculation with other than tubercular matter. True enough. But Cohnheim, who has once upheld the same view, subsequently admitted that his rabbits became tubercular apparently without *specific* infection only in localities where other tubercular animals were kept. If the tubercular parasites were not disseminated except by the experimental inoculation with the tubercular matter, the disease would soon be extinct. The point in question might be illustrated with a homely analogy which we hope, however, is not inapt. Inoculation with smallpox crusts is recognized as a sure way of reproducing that disease in all individuals susceptible to it. Yet at the time of an epidemic the inoculation with entirely different and harmless substances might be followed by smallpox, if the susceptible individual were otherwise exposed to the contagion. Similarly in the case of tubercular infection. But while the occurrence of tuberculosis in rabbits, animals so predisposed to the disease, is an accident—to say the least—after the introduction of non-tuberculous substances, it is the *invariable* consequence of an injection of Koch's bacillus. No matter, however, whether the disease is produced by the intentional introduction of the parasite, or whether the latter enters the system by an accident beyond the control of the observer, the parasite is there in every case. Koch, moreover, found that even species not at all liable to acquire spontaneous tuberculosis always succumbed to infection with the isolated parasite, simply because thus a larger number of bacilli were introduced. The growth of this microorganism is so slow that it is often eliminated from superficial wounds, without gaining a foothold in the animal body. Hence Koch preferred the more certain way of infection, viz.: by injection into the interior of the body of the animal. Formad questions Koch's motives in thus preferring injections into the peritoneal cavity and anterior chamber of the eye. But the reasons, above pointed out, he might have found in Koch's original article. On the other hand, it might be asked of Formad whether he or any one else has ever seen *local* tuberculosis (*i. e.*, of the iris) in consequence of the introduction of non-tubercular matter *into the eye*, even in as susceptible an animal as the rabbit.

Dr. Schmidt, an excellent microscopist, has attacked Koch on other grounds. He claims that the bacilli are nothing but fat-crystals. That fat-crystals can be seen in specimens treated, according to Schmidt, with a solution of caustic potash is not unlikely; in fact, we have seen similar crystals in such specimens. But they are wholly irrelevant to the point. A comparison of Schmidt's description and drawings with the specimens which we here present, will convince the Society that Schmidt has never seen the bacillus tuberculosis. It is not possible to confound crystals of such different appearance and dimensions with the bacilli stained by any of the various published methods correctly employed. It is not evident from Schmidt's article (*Chicago Med. Journal and Examiner*, Dec. 1882), whether he has followed these methods accurately or not, but, at any rate, he has not had any success with them. The query of Dr. Schmidt, why the bacillus tuberculosis stains differently from other bacilli (and the vague assertion of Dr. Formad that it does not), cannot weigh in opposition to the positive statement by the discoverer that such *is* the case, a statement fully confirmed by Ehrlich, Gibbes, Sternberg, Balmer and Fraentzel, and ourselves.

In order to demonstrate the presence of the bacillus tuberculosis in sputum, the latter should be dried on a cover-glass, in the thinnest layer possible. In order to prevent its being washed away by further manipulations, it is then to be rendered insoluble by passing it several times through a flame. One soon learns by experience how much it is to be heated. It is now ready for staining. In Koch's original article he recommends using an alkaline solution of methyl-blue for this purpose; the addition of an alkali is necessary in order to color the bacillus at all, though other aniline colors can be substituted for the methyl-blue, but with less success. On treating the specimen thus prepared with a solution of vesuvin, the brown color of the latter takes the place of the original blue in all the structural elements except the bacilli, which remain blue. This method seems to be the most difficult one to realize. We have had but indifferent success with it, especially as we could not obtain the colors used by Koch. Ehrlich substituted aniline oil for the potash in Koch's solution, dissolving this in water to the extent of its solubility. To this solution methyl-violet or magenta is added, and the specimen is then exposed for half an hour. The advantages obtained by Ehrlich are, first, a shorter time of exposure; and, secondly, greater reliability in the hands of an inexpert observer. The specimen is then decolorized by means of nitric acid. When the color has faded out of all other parts of the specimen, the bacilli still retain it, but their distinctness is improved by restaining the ground with some contrasting color in neutral solution. Ehrlich's method necessitates fresh preparation every time the solution is used; this, Gibbes has sought to avoid by using alcohol, which keeps the aniline oil in more permanent solution. But Gibbes' proportions of the various ingredients have not proven reliable in our hands. Mr. Woltmann has devised a modification of Ehrlich's method which we have found most serviceable. It amounts, practically, to a dilution of Gibbes' solution, with the addition of more aniline oil. Two grms. of magenta crystals are dissolved in a mixture of five grms. of aniline oil and twenty grms. of alcohol. Gradually, twenty grms. of distilled water are added. This solution is then filtered and kept permanently as stock. When required for use, one part of it is diluted with thirty parts of distilled water, and put

into a watch-glass; the cover-glass, with the dried sputum, is allowed to float upon the surface of this liquid. The time of exposure must be at least three hours with our dilute solution; but when the bacilli are present in limited number, a longer action of the staining-fluid, up to twenty-four hours, is more reliable; which has also been the experience of Balmer and Fraentzel. Good staining of the bacilli is favored by a temperature of about 40° C. We have always kept our specimens in a warm chamber. The glass is then washed in a current of water, and immersed in nitric acid diluted with twice its bulk of water. It is kept there just long enough to take all visible color out of it, whereupon the acid is again washed away with water. Under this treatment the bacilli retain their distinct red tint. They attract the eye more, however, if the ground be now stained blue. We accomplish this by a two minutes' exposure to a two per cent. solution of aniline blue (commercially known as 3 B. C.), the surplus of which is washed away. After drying by gentle heat, the specimen is mounted temporarily in spirits of turpentine, or permanently in Canada balsam. In it the animal-cells and mucus are blue, while the bacilli appear distinctly red. Other microorganisms, if present in small numbers, are not stained enough to attract attention; at any rate, they are never red. A good one-fifth inch objective suffices to see the bacilli, but a bright illumination without a diaphragm is absolutely necessary. It is much easier to recognize the bacilli when an Abbe's condenser is used; in fact, when the bacilli are few in number the examination is not reliable without it. In default of this, a short-focused objective may be attached to the substage as an imperfect substitute.

The bacilli correspond exactly to Koch's description. In some instances they are found in a state of sporification, which, observed with low powers, makes them appear granular. They are often slightly curved, and many pairs are seen in the form of a figure V.

Our own results are in full confirmation with those obtained by Koch and all other European observers. We have never seen the bacillus tuberculosis, or anything which could be mistaken for it, in the sputum of non-tuberculous patients. We have always found it in sputum of phthisical origin. We have likewise observed it in cases in which the rational symptoms pointed decidedly toward tuberculosis, while an examination of the chest gave ambiguous results; and we are convinced that time will prove the correctness of our diagnosis in these instances. We have, hence, no hesitation in claiming for the microscopic examination of sputum, *that it is the earliest and most reliable test for tuberculosis.* Like Balmer and Fraentzel, we have also found that the number of bacilli in the sputum gives some indication of the degree of intensity of the disease. They are, however, not evenly distributed throughout the sputum; hence it is best to examine several slides made from different portions in all questionable cases, and when they cannot be found the first time, the examination should be repeated on a subsequent day. It is, of course, essential that the sputum should come from the lung, and not from the upper air-passages.

The inevitable conclusions from our own work, as well as that of other observers, are that

Every case of pulmonary tuberculosis can be diagnosticated by means of microscopic examination of the sputum, even before the clinical examination reveals it with certainty; and that, *When repeated proper examination of the sputum fails to show the bacillus tuberculosis, pulmonary tuberculosis does not exist.*

To speak with certainty in any case requires, of course, that the observer should have familiarized himself with the methods and possess the proper appliances. Our success has been so invariable, that we feel confident enough to challenge the Society to produce a case of tuberculosis in which we cannot demonstrate the bacilli. Moreover, we are prepared to examine a reasonable number of sputa furnished to us without clinical histories, as the test of our assertions, and to submit the results of this examination to the Society at the next meeting.

A CASE OF DEATH FROM CHLOROFORM.

BY J. EDWIN MICHAEL, M.D.,

PROFESSOR OF ANATOMY AND CLINICAL SURGERY IN THE UNIVERSITY OF MARYLAND, BALTIMORE.

SAMUEL Y., colored, cook, aged about 50, came under my treatment a few weeks ago for stricture of the urethra. He was admitted to the Maryland University Hospital a short time before the beginning of my time of service (Jan. 1), under the care of my colleague, Prof. L. McLane Tiffany, with the following history. About seven years ago he suffered from difficulty in passing water, due to a previous gonorrhœa, and came to the University Dispensary for relief, where he was treated by Prof. Christopher Johnston. The operation then performed upon him, according to his own description, was that of rapid dilation by the instrument of Holt. This treatment was eminently successful, but failing to follow Prof. J's. directions to come from time to time and have an instrument passed, his stricture returned, and about four years ago he applied to the late Prof. Thomas R. Brown, of the College of Physicians and Surgeons, of this city, and was again successfully treated, this time by the internal cutting operation of Otis. Again neglecting to follow instructions, his trouble gradually returned and his condition changed from bad to worse, until his admission to hospital. Even then he was not admitted on account of his urinary trouble, but for an injury to the foot which he had sustained. When attention was called to the condition of his urethra, it was found that he could only pass his water by drops, and that with great straining. He was much emaciated and suffered frequently from chills and rigors. An examination of his urine revealed the presence of tube-casts and albumen. His appetite was poor, his sleep restless and unsatisfactory, and his general condition exceedingly bad, though no other organic disease was discovered. A full-sized instrument was checked at the bulbo-

membranous portion of the urethra, and external examination showed a large hard lump at a corresponding point; smaller instruments were tried until a long and patient trial of a number of the finest filiform bougies failed to reveal a passage. As the bladder was not much distended, and the patient could still relieve himself in some degree, aspiration was not deemed necessary. Appropriate treatment was ordered, and instructions given to the house physician to aspirate later if necessary. After several days of rest, during which there was sensible improvement in the patient's general condition, another search for the passage to the bladder was undertaken. After a long and patient trial I was again defeated, and pronounced the stricture impassable, at least so far as I was concerned. I therefore, having explained the serious state of affairs to the patient, and placed the whole matter before him as clearly as possible, advised external perineal urethrotomy without a guide. He consented after deliberation, and I determined to operate on Friday, January 12, at my clinic. Chloroform was the anæsthetic selected. Twenty minutes before the beginning of the inhalation one ounce of whiskey was administered, according to a practice which I always follow in using chloroform with adults. Another ounce was given at the beginning of the inhalation. The anæsthetic was administered by the two resident physicians, Drs. West and Mitchell, both of whom have had ample experience, and in whose skill and judgment I have every confidence. I requested them to be exceptionally careful in this case, on account of the desperate condition of the patient, and I am convinced that my injunction was carried out to the letter. The chloroform used was Squibb's; the apparatus, a towel cone open at both ends. The inhalation proceeded in the ante-room, while I explained the nature of the case and the proposed operation to the class. I had made but few remarks, however, when I was hurriedly called from the clinical theatre by Dr. West, and informed that the pulse had suddenly ceased. By the time I reached the ante-room, the lower extremities were well elevated, the head hung over the end of the operating table; hypodermic syringes filled with whiskey ready to be applied, and the battery in the corner of the room clicking away ready for use. Artificial respiration was being practised with success, as far as causing the ingress and egress of air to and from the lungs was concerned. My opinion, when I saw the state of the case, coincided with that expressed by Dr. W., that it was a death from heart paralysis, and that all efforts at resuscitation would be vain. The means at hand were however faithfully used for fifty minutes after the abrupt cessation of the pulse, but without the slightest response. Respiration could be produced both with the hand on the sternum and the battery, but no heart sounds could be heard nor the slightest pulsation elicited. Hypodermic injections were used, but only sparingly, since they evidently could do no good without a circulation. The death occurred early in the inhalation, as is the rule in cases of this kind. The patient was by no means fully under the influence of the anæsthetic, but still in the stage of excitement. The pulse ceased as he was making an effort to rise from the table. About three drachms (estimated) of chloroform had been poured in the cone.

Autopsy, five hours after death, made by Dr. W. T. Councilman. The abdominal cavity was opened and the digestive tract, which presented nothing worthy of note, first examined. Trachea contained a little frothy mucus. Lungs contained some insignificant patches of old emphysema. They were congested in a high degree, and bled (when incised after examination of the heart) very freely. Heart about normal in external appearance; right side distended, as also venæ cavæ and pulmonary artery, with fluid blood. Left ventricle very slightly (?) hypertrophied, containing, as also auricle, small quantity of fluid blood. Heart tissue (macroscopically) perfectly sound. All orifices and valves perfectly normal. Liver highly congested, and bleeding freely on incision. Right kidney somewhat contracted, pelvis dilated and thickened to a considerable degree, as also right ureter throughout its whole extent. Left kidney firmer than normal to the feel, but not otherwise changed. Capsules of both kidneys slightly adherent. Bladder contained something over a pint of urine; walls thickened considerably; slight tendency to sacculation. Follicular cystitis, especially in the trigone. Moderate prostatic hypertrophy. Urethra, anterior portion of prostatic and two-thirds of membanous portion largely dilated. Stricture occupying about three-quarters of an inch at bulbo-membranous portion; pendulous portion normal. The stricture was a somewhat notable one, as was to be expected after the use of both Holt's and Otis's instruments, and subsequent recontraction. The urethra, above and below, came to irregular points, somewhat overlapping each other, and urine seemed to pass through a sort of cribriform septum between them. Dr. Councilman was unable to find a regular passage through it. Brain and cord were not examined, as it was deemed unnecessary.

Remarks.—Although I may say I have been living in an atmosphere flavored with chloroform for the past ten years, this is the first (and I need not say I sincerely hope it will be the last) death I have seen occasioned by the drug. That the anæsthetic killed the patient, I think is equally apparent from the clinical events and the post-mortem details given above, and that the fatal end was reached by way of paralysis of the heart I consider beyond doubt. That this kind of death will occasionally occur from the use of chloroform, the most enthusiastic admirer of the drug cannot deny. The chloroform used was that generally acknowledged to be the purest in the market; previous alcoholic stimulation was resorted to with special reference to heart failure; those who administered the drug were careful, experienced, and competent; the apparatus used was the simplest and safest, and the means most in vogue for resuscitation were at hand, and were used promptly and skilfully when the emergency came. Moreover, I have used the same chloroform, at the hands of the same assistants, both before and since this unfortunate case, with most satisfactory effect. The occurrence of the case in my practice has only illus-

trated what I knew had occurred before, and could occur to any one who uses chloroform for the induction of anæsthesia. Whether there is less danger in the use of sulphuric ether, ethyl bromide, or other anæsthetics, I shall not, in this place, attempt to discuss. I consider it my duty, however, to report my case as a contribution to the mass of facts bearing on the question, and hope, in common with other surgeons, that we may ultimately, by the collection and comparison of *all* the facts, be enabled to definitely decide the question as to what is the safest and the best anæsthetic.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

(Service of PROF. CARL BRAUN.)

A HIGH FORCEPS OPERATION.

(Specially reported for THE MEDICAL NEWS.)

A CASE of the high operation which Prof. Carl Braun performed upon Wednesday, November 8, before the class will serve to convey the teachings of the Vienna School upon a number of important subjects in relation to the use of forceps.

The patient, a native of Austria, unmarried, thirty-two years old, in her fifth pregnancy at full term, felt labor pains towards the evening of November 7, and entered the lying-in ward of the First Obstetrical Clinic at 2.30 A.M. November 8. Abdominal palpation revealed pregnancy at full term, a large child, head presentation, first position. Heart tones were loud and regular. By combined external and vaginal examination a contracted pelvis was demonstrated. The measurements were:

Distance between the anterior and superior spine, ...	21½ cm.
Distance between the iliac crests, . .	25½ "
" " trochanters, .	30½ "
External conjugate diameter, . .	18 "
True " " . .	8½ "
Abdominal circumference, . . .	82 "

The os became fully dilated at 5 o'clock A.M., and the rupture of the bag of waters occurred some moments later. The head engaged in the superior strait and advanced very slowly until a segment of one-third its volume was within the pelvic cavity. The head now became firmly fixed, with the sagittal suture in the transverse diameter, and a considerable caput succedaneum began to form. The corpus uteri continued to contract powerfully, at regular intervals, without effecting in the slightest degree any change in the position of the head, while the collum uteri became distended, and finally reached to the umbilicus. Later the condition of tetanus uteri was observed, and the corpus uteri could be felt as a firm hard tumor above the umbilicus, very sharply differentiated from the distended, relaxed collum uteri, situated below. At 11.30 o'clock A.M., the woman received a hypodermic injection of morphia, and at 12.30 o'clock P.M., she was taken into the lecture-room for the application of the forceps.

Prof. Braun, after careful disinfection of his hands by liberal use of a 3 per cent. solution of carbolic acid, 10 per cent. solution of potassium permanganate, a solution of hydrochloric acid of similar strength, green soap and a brush, examined the woman, and confirmed the diagnosis previously made in the lying-in ward. He said the child would weigh more than 3500 grammes, and would have a greater length than 50 cm. After catheterization, the vagina and external genitals of the patient were copiously irrigated with a 3 per cent. solution of carbolic acid, immediately before the application of the forceps.

While Prof. Braun is in no sense of the word a strict disciple of Lister, he is no disbeliever, and always gives his patient the benefit of a doubt, with the exception of the spray. In passing, it may be mentioned that careful irrigation with disinfectant fluids was employed under his direction long before Esmarch called public attention to the subject.

For the operation, Prof. Braun selected his own instrument. This is the long forceps of Sir James Simpson, with the fenestræ closed by a thin metallic plate (Hohl's modification), the whole instrument, including handles, being covered by a thin layer of hard rubber. The weight of the instrument is 600 grammes.

The advantages claimed for the instrument are:

1. The impermeable, smooth surface.
2. The easy, antiseptic cleansing, because septic material finds no lodgement in any groove.
3. The durability, because hard rubber resists rust, chloroform, chloride of iron, carbolic alcohol, which is not the case with the nickel or gold-plated instrument.
4. The instrument requires no heating apparatus.
5. The avoidance of all sharp, metallic angles and points, which injure the skin of the head and face.
6. The obliteration of the fenestræ prevents the feathering of the blade.

Prof. Braun speaks in unmitigated terms of disapprobation against Tarnier's forceps, Alexander Simpson's instrument, and Felsenreich's modification of the last-named forceps. Felsenreich's forceps, which have been used at the clinic for some months past, present few points of difference from Alexander Simpson's original instrument. For the past six months there has been much discussion in the Vienna Obstetrical Societies as to the value of the last-named three instruments. For this reason, Prof. Braun has allowed his assistants to use them at the clinic. The results, upon the whole, have not been favorable. Mother and child have, in a number of cases, sustained serious injury. Prof. Braun himself never uses the instruments, and pronounces the principle to be radically false, and the instruments themselves a fashionable folly ("Moderner Schwindel").

The patient having been slightly chloroformed, was placed upon her back, with her lower extremities elevated, and the blades of the forceps were adapted to the long diameter of the fœtal head, the maternal tissue being guarded by the introduction of four fingers above the pelvic brim. Seated quietly in his chair, the operator applied traction in the axis of the pelvic brim, and after a few, though sometimes powerful, efforts, brought the head down into the middle of the pelvic canal, where rotation was effected by readjustment of the blades, and the birth of the child rapidly followed.

Prof. Braun never used the forceps as a *lever* or *compressor*.

The child proved to be a male, weighing 3900 grm. with a length of 52 centimetres. The child was profoundly asphyxiated, but when the cerebral congestion was relieved by its elevation above the level of the placenta, the breathing became normal, and the facial hyperæmia disappeared. The placenta was at once expelled, the corpus uteri being thrust downwards towards the symphysis in such a manner as to cause complete descent of the collum uteri into the cervical canal. The collum uteri folded upon itself as if telescoped.

When the cord ceased to pulsate, 30 minutes after its delivery, it was severed, but not ligated. This departure from custom was made, in order to show that liga-

ture of the cord, after cessation of pulsation, is not a scientific necessity.

Prof. Braun is not an iconoclast, however, and in the lying-in ward all umbilical ends are ligated in two places. After careful irrigation of the vagina with a 3 per cent. solution of carbolic acid, an iodoform tent, weighing 5 grammes, was introduced into the uterus.

At the time of writing, both mother and child are thriving.

MEDICAL PROGRESS.

TUBERCULOSIS OF THE FALLOPIAN TUBES.—DR. JUSTUS SCHRAMM, of Dresden, contributes to a recent number of the *Archiv für Gynäkologie* a short paper on the above subject. Out of 3386 autopsies upon women, he found this condition present 34 times, or about 1 per cent. There were of these, 806 who died from pulmonary phthisis or from tuberculosis of other organs, so that the proportion in which the tubes were affected in them was 4.2 per cent. In the 34 cases of tuberculosis of the tubes, the uterus was affected 7 times, there was tubercular disease of the peritoneum 21 times, and more or less advanced lung disease in 29. Both tubes were diseased in 27 of the cases, the left alone in 5, the right alone in 2. The large majority of Dr. Schramm's cases occurred between the ages of twenty and forty. In only one of the 34 was there reason to think that the disease of the tubes was primary; but in this case the bowel and peritoneum were also affected, the greater amount of disease in the tubes being the only reason for thinking them the part first affected. It is remarkable that, while tuberculosis of the urinary apparatus is not uncommon in man, it seems to be very rare in women. Dr. Schramm says that only one case has been seen in the Dresden Hospital during the last twenty-two years. Perfectly healthy Fallopian tubes are seldom found, according to our author: and he quotes Hennig, who thinks that catarrh of the tubes is present in about a quarter of all cases (whether of dead bodies or of living women is not stated). The latter author also thinks that the tubes are the subject of catarrh oftener than any other part of the genital mucous membrane. Dr. Schramm finds that tuberculosis of the tubes originates in catarrh, and that it commonly begins in the ampulla. The walls become thickened, the tube filled with pus, and then caseation takes place, followed by ulceration of the mucous membrane. Miliary tubercles are not common; when present they are seen towards the abdominal end around the caseous knots. Histologically their structure is the same as that of tubercle in other parts. For a detailed account of this, as well as of the changes in the bloodvessels (which are also analogous to those elsewhere seen), we must refer our readers to Dr. Schramm's paper.—*Medical Times and Gazette*, January 20, 1883.

SUCCESSFUL EXTIRPATION OF THE KIDNEY.—DR. REINHOLD BRUNTZEL reports a case in which the left kidney was removed from a woman aged 33, on account of a fibroid tumor, weighing 37¼ pounds, of the renal capsule. The abdomen was opened by an incision extending from the xiphoid process to the symphysis pubis. Recovery was complete in four weeks.—*Berliner klin. Woch.*, Dec. 4, 1882.

RETRO-PERITONEAL FIBROMA.—In a recent number of the *Zeit. für Geburtshülfe und Gynäkol.*, a case is recorded by DR. MORICKE, which he thinks, with reason, is unique, and we therefore briefly condense his account of it. The patient was twenty-four years old, had had two children, and was in fair general health. A firm, non-fluctuating tumor, as big as a man's head, rounded, and apparently loosely connected with the right side of the pelvis, was felt in the abdomen. This was diagnosed (erroneously, as it turned out) to be an ovarian tumor, and therefore an operation was undertaken. After the peritoneal cavity had been opened, the tumor was found to lie behind the mesentery. It was divided into two unequal parts by a furrow running from the upper and left part of it downwards and to the right. In this furrow lay a part of the ileum, the mesentery of which was spread over the tumor. The bowel was dissected off the new growth with the mesentery, which was cut through on each side, a little distance from the intestine. The dissection was one of great difficulty, the connection between tumor and ileum being very intimate. After the bowel had been freed, the flaps of mesentery raised with it were united over the part that had been attached to the tumor. At a portion of it the mesentery dissected up was not enough to surround the bowel without risk of stricture; and therefore, here, about half of the circumference of the intestine was left without any peritoneal coat. The tumor was then removed. It was fibrous in structure, and weighed about two pounds and a quarter. An ovary, which contained a small dermoid cyst, was also taken away. Slight pyrexia followed the operation, and lasted four weeks. The patient left her bed thirty-three days, and the hospital forty-two days, after the operation. Dr. Möricke remarks that the case is probably unique in the fact of a foot of intestine being deprived of its mesentery and left in the abdomen, and the patient nevertheless recovering.—*Medical Times and Gazette*, January 13, 1883.

ARTIFICIAL HUMAN MILK.—The method of preparation of artificial human milk as recommended and used by PROF. FRANKLAND is as follows: Let one-third of a pint of new cow's milk stand twelve hours, then remove the cream, and add to it two-thirds of a pint of new milk as fresh from the cow as possible. To that one-third of a pint of blue (or skim) milk left after taking away the cream, add a piece of rennet (about one square inch in size) which, after it has served its purpose, can be taken out and used daily for a month or two, and allow the vessel holding the skim milk to be placed in warm water and there remain from five to fifteen minutes, until curdling is effected. Break up the curd repeatedly and carefully separate the *whole* of the whey, which should then be rapidly heated to boiling in a small tin pan, placed over a spirit or gas-lamp; during this heating a *further* quantity of casein (technically termed "fleetings") separates, and so straining after this, through fine muslin, is then required. Now dissolve one hundred and ten grains of powdered milk sugar in *hot whey*, and mix it with two-thirds of a pint of new milk as before prepared with extra cream. This gives us one pint of artificial human milk, which should be used *within twelve hours* after its preparation; all vessels and apparatus concerned in the manufacture being kept scrupulously clean.—*Physician and Surgeon*, January, 1883.

THE OPHTHALMIC LESIONS IN GENERAL PARALYSIS.—M. CH. DUTUGUE having examined the eyes of a large number of general paralytics, is led to draw the following conclusions:

In the first stage of general paralysis there is always irregularity of the pupils, papillary congestion, and varicose dilatation of the retinal arteries and veins.

In the second stage, the disorders are more advanced, with the addition of marked papillary and peripapillary œdema. The disk is often obscured, or even masked, by œdematous swelling, whose thickness is directly proportionate to the duration of the disease.

In the last stage, which terminates in death, the papilla is small, flat, and gray in color; the vessels which normally give it a pink tint having disappeared from the optic atrophy. To this atrophy, atrophy of the choroid, retinal hemorrhages, and granulations of the retina and choroid, are also to be added.—*L'Encéphale*, January, 1883.

THE EXCRETION OF LIME SALTS IN PHTHISIS.—This subject, which possesses clinical as well as pathological interest, inasmuch as it bears upon treatment, has once more been investigated by PROF. SENATOR, of Berlin (*Centralblatt f. die med. Wiss.*, 1883, page 11). It is no new observation that the amount of lime in the urine is increased in phthisis, but Schetelig had recently questioned the correctness of the conclusion. Both relatively and absolutely, however, the calcareous salts appear to increase in the urine during tuberculosis. There are very wide limits within which the amount of this excretion varies in health, viz., from .081 to .77 grammes in twenty-four hours. Still, this maximum, even, is exceeded in phthisis; and the continuous observation of an individual over a lengthened period also demonstrates a positive increase. The source of the lime salts cannot be found in the food, neither can it be referred to the wasting of the lungs, for these organs actually show an increase, and not a diminution, of their calcareous constituents when tuberculous. Senator suggests that the bones are to be credited with the excessive discharge, inasmuch as they manifestly waste in phthisis; the yellow marrow becoming red, and the lime salts being very probably set free in the process.—*Medical Times and Gazette*, January 20, 1883.

VERTIGO IN TABES.—DRS. MARIE and WALTON believe that vertigo, closely resembling that of Ménière's disease, is of more frequent occurrence in tabes than is generally believed. The occurrence of vertigo in such cases usually coincides with the appearance of the early symptoms of tabes. The vertigo cannot be attributed to general atrophy of the auditory nerve, as its auditive function is preserved unimpaired, but may probably be attributed to lesion of certain fibres of the auditory nerve distributed to the semicircular canals, the so-called nerves of space.—*Rev. de Médecine*, Jan. 10, 1883.

THE BACILLUS TUBERCULOSIS.—We learn from the *Wiener Med. Woch.*, No. 51, that Prof. Balogh, speaking recently before the Royal Medical Society of Buda-Pesth, stated that he had detected, in the marshes surrounding Buda-Pesth, a bacterium which behaves very like the bacillus of tubercle, but which he appears not to regard as such. He contends that neither the form nor the staining with dyes is sufficient to distinguish the varieties of Schizomycetes (fission-fungi). Experiments were conducted in which animals were allowed to inhale the fission-fungi of the marsh, with the result that, on post-mortem examination, little nodular growths were found in the lungs, heart, and kidneys; in the nodules the fungi were found in various stages of development, and the rod shapes stained with methylin-blue and vesuvin, just as do the bacilli of tubercle. Inoculation with bacteria from scarlatinal urine, and from ordinary sputa of bronchitis, gave rise to similar nodular growths which were not considered to be "tubercle." Prof. Koryanyi mentioned a case of a phthisical patient suffering from syphilitic lupus, which had improved under the use of iodide of potassium. In the sputa of this case, which was regarded as one of pulmonary syphilis, the bacillus of Koch was detected; hence Koryanyi holds that the presence of this bacillus is not a sure sign of "tuberculosis." We know of no more difficult questions than those raised by such observations. They seem always capable of more than one interpretation. It is possible that the bacillus found in the fens is identical with that supposed to be the cause of tuberculosis. Again, the notion that morphological appearances are not enough to split the group of the fission-fungi into varieties, has been upheld by eminent botanists. The remarks above reported raise again also the difficult question as to what is to be called tubercle. We may repeat here what we have elsewhere said, that various causes may give rise to products which to our senses are similar and indistinguishable.—*Medical Times and Gazette*, January 6, 1883.

NEW OPERATION FOR TOTAL EXTIRPATION OF THE TONGUE.—DR. GIOVANNI FIORANI has employed with success the following procedure in extirpating the tongue. The patient being seated on a chair in the upright position, with the head well extended and supported on the breast of an assistant, a vertical incision, one centimetre in length, and simply passing through the skin and cellular tissue, is made in the median line of the sub-hyoid region. The operator then introduces the index-finger of the left hand into the patient's mouth and passes it down into the left lateral furrow as near to the hyoid bone as possible. A trocar is then passed into the pharynx through the incision in the skin, and the loop of a doubled wire then passed through the canula: a thread is then passed through this loop and drawn out through the canula so that its ends remain in the mouth and the loop lies outside of the wound in the neck.

A similar procedure is then practised on the right side of the neck, and the free ends of the thread passing through the left side are then drawn out on the right side.

The thread is then replaced by a rubber cord 80 centimetres long and 4 millimetres thick, which is placed in position by passing it through the loop of the thread, and then drawing the ends of the thread out through the wound.

One loop of the double elastic ligature is then passed forward over the tip of the tongue, so that it lies under the tongue on the floor of the mouth and the ends are then tightened and knotted in front of the neck.

There is very slight pain produced during the operation, and the pain produced on tightening the ligatures only lasts a few minutes. Inflammatory reaction may be subdued with ice. On the third day the tongue becomes gangrenous; infection may be prevented by packing the mouth with iodoform gauze. The tongue, which should be secured by a thread passed through its tip, separates on the tenth or eleventh day.—*Rev. de Chirurgie*, January 10, 1883.

PASTEUR'S RESEARCHES.—A letter was read at a recent meeting of the Académie des Sciences from M. Pasteur, giving an account of his progress in some researches in which he is at present engaged in the district of Vaucluse. He has gone there to investigate a disease of pigs, which, in one valley of the Rhone, has recently been fatal to 20,000. The disease is called "le rouge des porcs;" and M. Pasteur announces that he has discovered its cause to be a very minute organism, which in point of size resembles that of chicken cholera. It differs, however, in its physiological properties, since it has no action on fowls, but it is fatal to rabbits and pigs, especially to white pigs. M. Pasteur has convinced himself, by experiments, that one attack affords protection against another, and he has succeeded in inoculating pigs with organisms which have been weakened by culture, and in thus rendering these animals insusceptible.—*Lancet*, December 16, 1882.

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SATURDAY, FEBRUARY 17, 1883.

THE JOHNS HOPKINS HOSPITAL.

WE have had for some time upon our table a number of cuttings from Baltimore newspapers of last year, relating to the proposed opening of the Johns Hopkins Hospital, and the moving of the University of the same name from its present quarters near the centre of the city to a point in the suburbs. It would seem that there has been some difference of opinion among the trustees as to the time when the Hospital should be opened for the reception of patients, and that two of the trustees, Mr. John W. Garrett and Dr. Alan P. Smith, presented a report on the subject, in which it was advised that the Hospital should be opened in September, 1883, with ward accommodation for fifty-six patients, the dispensary, amphitheatre, and apothecaries' building; the reasons given being that the city is in want of gratuitous hospital accommodation, and that the University desires to organize its medical department as soon as possible to meet the demands which are made upon it, and that it cannot do this until the hospital is ready to furnish opportunities for clinical instruction. On the other hand, the majority of the trustees thought it better to wait until accommodation for at least one hundred and twenty-five patients was provided, that there was no urgent demand for hospital accommodation for the sick poor of Baltimore, and that the University would be rather glad than otherwise if the organization of its medical department was postponed for two or three years, as it has plenty of work on hand. The result was a decision that the Hospital should be opened if possible in the fall of 1885, and as the majority of the trustees of the Hospital are also trustees in the University, we presume that this is equivalent to a decision that the opening of the medical department of the University will be postponed to the same time.

Having recently had occasion to visit Baltimore, we made use of the opportunity to visit the hospital grounds and see what progress had been made. The hospital is located in East Baltimore near the top of the side of a hill which faces the city to the west, of which it commands an excellent view. The following buildings have been placed under roof, viz., the administration building, two pay wards, one octagon ward, three common wards, one isolating ward, kitchen, nurses' home, laundry, autopsy building, dispensary, and amphitheatre. The connecting corridors have not been constructed, nor the bath house, but with these exceptions the external work on all the buildings which it is proposed to erect at the present time seems to be finished. Ultimately, another octagon ward, three common wards, and one isolating ward are to be built on the south side of the lot, corresponding to those already erected on the north.

The buildings are of brick, with trimmings of a peculiar dark-blue fine-grained stone which has an excellent effect, and the materials and workmanship are of the best quality It is not our purpose to discuss the merits of the plan adopted, or to describe in detail the several buildings, since, even if we had all the data, it would be impossible to give an idea of the arrangements without the use of plates, which cannot be given here, and we can only notice briefly those features of the hospital which are more especially intended for educational and scientific work, and through which it is brought into immediate relations with the University. The most peculiar of these, and the one which seems most likely to have a strong influence on the plan of medical education to be adopted, is the provision in the administration building for lodging some thirty or forty students, the design being that the graduating class shall reside in the hospital during the last year of the course, which is to be devoted mainly to clinical work. The rooms for this purpose occupy the whole third story of the administration building, are large, airy, light, and well heated and ventilated, and are amply provided with bath-rooms, etc. On the lower floor is a library and reading-room for the students, and in an annex a handsome dining-room looking out at the end upon the central garden.

The building designated in the above list as the autopsy building, is situated on the north-east corner of the lot, which is its highest point, and diagonally across the street from grounds belonging to the University, and upon which it is proposed to erect the buildings for the medical school. This autopsy

building is really a pathological institute, or laboratory, containing a room for the preservation of the dead, a room for meeting of friends, etc.; a small amphitheatre, the arrangements for the ventilation of which are very good; two large rooms facing the north for microscope work and pathological investigations; rooms for photo-micrographic work, etc. This building is entirely detached from all others, and its arrangement appears to be very convenient and satisfactory.

The dispensary and amphitheatre are two large buildings located in the middle of the north side of the grounds in convenient proximity to the proposed medical school. Each building contains a large central room about fifty feet square, which, in the dispensary, is the reception and waiting-room for patients, and is surrounded with smaller rooms intended for the examination of patients by the clinical teachers.

In the amphitheatre the large room has seats for about two hundred and fifty students, and the smaller rooms adjoining are for waiting-rooms, the reception of accident cases, etc.

The two buildings are connected by a short covered way which allows of the free passage of air between them. The amphitheatre is lighted by a skylight, and by north windows behind the seats. A small dark-room is connected with it for the use of a photographer, so that a photograph can be readily taken of any case of interest. A corridor is to connect the amphitheatre with the basement of one of the wards.

A large amount of work remains to be done on this hospital, and as building operations must be restricted to the available income, which is about $130,000 per annum, it would require between four and five years to complete all the buildings and their connections, with the necessary heating apparatus and machinery. There can be little doubt that the trustees have acted wisely in deciding not to open the hospital before 1885. Even then they will not have had sufficient funds to finish all the buildings; and since the greater part of the income will be required to meet running expenses as soon as the hospital is opened, their building operations will drag on for ten years to come.

No doubt there is a demand for the medical department of the University, and the sooner it can be established the better; but this is to be taken with the proviso that it is organized on a proper basis. It is to the interest of the University that the hospital shall be as complete as possible, and be able to furnish the most ample clinical facilities.

So far as we can learn, the University authorities have not yet given the subject of their medical department much consideration. At all events, they have decided nothing; but the time is not far off when they should be giving the matter very careful attention.

We shall return to this subject hereafter. Meanwhile, we can say with confidence that if the medical school is as carefully planned, and as thoroughly worked out as the hospital has thus far been, it will be a great success.

ANOTHER DEATH FROM CHLOROFORM.

THE frequency of these announcements, surely, demands that the organs of professional opinion utter some authoritative mandate as to the use of a safer anæsthetic. If ether is, as we have abundant reason to believe, far safer than chloroform, ought there be longer delayed some authoritative expression founded on the general verdict of the medical profession, or a legislative enactment, to prevent the use of the more dangerous agent, unless the conditions requiring it are exceptional?

The last example affords capital illustration of several points which have, from time to time, been set forth in these columns. The cardiac failure induced by the first impression of nearly pure chloroform vapor; the administration of the anæsthetic by a method which ensures the exclusion of air from the first portion of vapor inhaled; and the omission of an expedient which we have reason to believe, if rightly timed, prevents many of the accidents occurring. It may be well to briefly recapitulate these several points, taking the example now before our readers in illustration.

Dr. Michael arranged all the details connected with the administration of the anæsthetic very carefully and prudently, in accordance with the general practice. There are several points, however, sanctioned by usage, which appear to us to demand criticism. The administration of a large dose of whiskey before beginning the inhalation, it seems to us, is not based on a proper knowledge of the action of this agent. *Large doses* of alcohol depress the heart's action, and lower the temperature. The subcutaneous injection of morphia, as originally proposed by Bernard, and afterwards by Nussbaum, and in this country advocated by the late Dr. Wm. Warren Greene, and by Dr. J. C. Reeve, of Dayton, is an expedient of the utmost value, both to facilitate the inhalation, and to prevent cardiac failure. Morphia and atropia are now used together, with distinct advantage. If administered before beginning the inhalation, the cardiac failure which so often occurs when the first impression is made on the motor ganglia will be largely prevented.

In this fatal case, we hear again that a towel cone was the inhaler used. A quantity of chloroform is poured into the cone, the application is made over the mouth and nose, and sufficient air is supposed

to enter from the open top of the cone. Now, as the vapor density of chloroform is so much greater than atmospheric air, it is obvious, having regard to the law of diffusion of gases, that for the first few minutes of the inhalation the patient receives almost pure chloroform vapor. In a great majority of cases, as Dr. Michael well observes, it is the first portion of chloroform inhaled that paralyzes the heart. The reason for this—apart from any question of cardiac disease—is that a concentrated vapor first passes into the lungs. In the administration of chloroform it is indispensable to secure a proper admixture of air, and if this is not accomplished, any method of inhalation becomes dangerous.

We have so recently discussed these questions connected with chloroform administration, that we forbear from further comment. We cannot, however, conclude without expressing our conviction that with our existing knowledge of anæsthetics, no one is justified in using chloroform as the anæsthetic when ether can be substituted.

HYGIENE OF WRITING IN SCHOOLS.

AN interesting paper has recently been published by Berlin, on the influence upon the eyes and the spine of school children which so simple a matter as the position of the copy-book, in writing, may exert. It is based upon the report of a commission appointed to investigate the effect of slanting writing in the schools of Würtemberg. It was found that the attitude assumed by the child in writing was determined by the position of the book; and optical and physiological reasons are given for this fact. In writing, or drawing with straight lines, the visual axes move, by perference, in two general directions, vertical and horizontal, because in looking upwards or downwards, or to either side, their paths are straight, while in diagonal movements they describe a curve.

Three hundred and seventy-one children were carefully studied while in the act of writing, and it was discovered that about 93 per cent. of them made the down-strokes in a direction nearly at right angles with that of the base line, *i.e.*, the line connecting the centres of rotation of the two eyes and forming a triangle with the visual axis in convergence. This is done with least strain when the copy-book is tilted toward the left; when the child is compelled to write with the book parallel to the edge of the desk, he brings the base line perpendicular to the down-strokes by turning his head towards the right and twisting his spine. This contortion brings the eyes nearer to the page, and the left eye nearer to it than the right.

In a discussion of this subject at the meeting of the Ophthalmological Society, at Heidelberg, Laqueur and Manz favored the slanting system of writing with an oblique position of the book, on the ground that it throws the work more on the flexor muscles of the forearm, which are naturally stronger than the extensors, and Berlin dwelt upon the fact that this system admits of greater rapidity of execution.

A practical point in ocular hygiene is the material provided for children to write upon. The common slate has incurred the disapproval of ophthalmic surgeons, and Horner strongly advised that it should be banished from the schools. As its surface is shiny and presents an insufficient contrast with the letters, it necessitates a nearer approach of the eyes, and consequent excessive accommodation and convergence—the most important factors in the development of myopia. Cohn has, therefore, caused artificial white slates and special pencils to be manufactured, which offer the conveniences which have given the old articles universal currency among former generations of children without their hygienic defects.

KAIRINE.

IN the attempts to produce quinine, synthetically, now making in Germany, various new products which have been employed medicinally, have been brought forward. Although a true quinine has not thus far been accomplished, a near approximation to it has been made. Quinoline or chinoline is one of these. Recently, however, DR. FISCHER (*Berliner klin. Wochen.*, No. 45, 1882) has produced a phenol, to which he has applied the term *kairine* for short, although its true name is *oxy-quinoline—methyl-hydride* in chemical language. The salt which has been employed medicinally is the hydrochlorate. It has no irritant qualities, and in the normal state causes no obvious disturbance. All the members of the phenol group are antiseptic and antipyretic. The antipyretic stands in a nearly constant ratio to the antiseptic action. This fact is strongly suggestive, for if the power to destroy the organisms of disease or septic ferments, is the source of the antipyretic action, it is in a high degree probable that the febrile action is a consequence of the multiplication and growth of germs or ferments. The action of antiseptics lends support to the parasitic or zymotic theory of the infectious diseases.

Besides kairine, there have been introduced kairoline, and in addition to resorcin, quinoline and pyrocatechin, all members of the phenol group, and all possessed of antiseptic and antipyretic effects. We are confident that the time is not distant, when that most valuable of all antiseptics and antipyretics—quinine—will be produced in the laboratory of the chemist.

THE ALKALOIDS OF THE HUMAN BODY.

LIKE certain plants, the human body has the power to produce alkaloids. Our readers have been placed in possession of the facts regarding *ptomaines*, those alkaloidal substances formed in the course of putrefactive decomposition. These ptomaines, like the alkaloids recently recovered from the urine in infectious diseases, are vegetable in origin. Beside these, recent researches have demonstrated the existence of similar alkaloids in the bodies of normal, living persons, formed in the digestive tube, and apparently elaborated, says Bouchard, by vegetable organisms—agents of intestinal putrefaction. The alkaloids found in normal urine represent a part of those produced in the intestines; they are absorbed and subsequently eliminated by the kidneys. It has been found that those disorders increasing intestinal putrefactive decomposition, augment the quantity of the alkaloids found in the urine. It is considered probable by Bouchard that the alkaloids of certain infectious maladies may have their origin in microbes contained in the tissues or fluids, as it seems established that in typhoid fever a portion of the urinary alkaloids originate in the intestinal canal.

It is obvious that these researches open up great possibilities in respect to the study of the pathogeny of infectious diseases in general. For example, the supposed typhoid poison may be developed by a certain form of fermentation taking place in the intestinal canal. Clinical therapeutics contributes to the number of these probabilities. Such a theory, or rather the new fact regarding the existence of a group of alkaloids, is supported by the results of the so-called "specific medication." The calomel purgative treatment of the first week, the iodine method, and especially, the carbolic acid medication of the whole course of typhoid, indicate by the results obtained from them, the probability of some kind of intestinal fermentation producing the material which, by its action on the solids and tissues of the body, causes the objective phenomena of typhoid. That which is thus rendered probable for typhoid, may also, in some form, be regarded as causative of the various infectious diseases.

ARTIST DOCTORS.

IN a very interesting article on "American Etchers," in the *Century* for February, Mrs. Schuyler Van Rensselaer mentions with honor, among other American etchers, the name of Dr. Leroy Milton Yale, and gives a very creditable example of his work, which, we observe, was an August vacation study. Etching has been only a recreation with him, yet he was one of the most earnest founders and fosterers of the New York Etching Club. We wish that more of our profession would take up similar artistic or literary studies, not only as a recreation, but because they broaden the mind and soften the hard grind of daily work. Sir Henry Thompson is a notable instance of how a very busy London surgeon can achieve somewhat of fame with the brush. Mr. Seymour Haden is always to be first named among the etchers, of course, but his chief fame is as an artist rather than a surgeon.

So far as we know, Dr. John H. Packard is the only active member of our Philadelphia profession who has done much in art, and even his pencil and brush have not given us of late as much as we could wish.

URETHRAL INJECTIONS OF BROMIDE OF POTASSIUM

DR. CAMBILLARD, in his *Thèse de Paris*, for 1881, advocates the employment of a solution of potassic bromide to quiet chordee. Every one will admit, he truly says, that the painful erections called chordee are very difficult to relieve, and that the number of the remedies proposed is only equalled by their inefficiency. He has obtained uniformly good results from urethral injections of the following:

℞.—Aquæ, ... ℥ij.
Glycerini, ... ℥iij.
Potassii bromidi, ... ℥iss.
Tinct. opii, ... ℥j.—M.

Sig. Four injections of this quantity in twenty-four hours.

To prevent the nocturnal attacks, he insists that the last injection be practised just on retiring for the night. These injections cause almost no pain, and are very effective in relieving the distress.

THE College of Physicians of Philadelphia has just been made the recipient of the generous gift of $5,000, from its distinguished Fellow, Dr. S. Weir Mitchell, as an entertainment fund; the interest to be expended annually for the purpose implied. This selection of a purpose has been wisely made. Founded in 1787, the College of Physicians is at once the oldest, the wealthiest, and among the most select of the medical societies of the country; and it is as important that it should set an example of this kind as that the wealthy and influential citizens of a community should lead in its social life. The commodious rooms of the College afford ample space for entertaining a large number, and its magnificent library and valuable museum are important adjuncts for such a purpose. We predict that the impetus recently given to the activity of the College in the direction of clinical and scientific work, will be increased by this new movement, and that it will also stimulate the contribution of money required for the proposed enlargement of the building so as to accommodate it to the growing needs of the library and museum.

REVIEWS.

THE SYSTEMATIC TREATMENT OF NERVE PROSTRATION AND HYSTERIA. By W. S. PLAYFAIR, M.D., F.R.C.P., Professor of Obstetric Medicine in King's College, etc. 12mo. pp. 92. London: Smith, Elder & Co., 1883.

The Same. 12mo. pp. 111. Philadelphia: Henry C. Lea's Son & Co., 1883.

IN this attractive little volume Dr. Playfair has collected the two papers on the treatment of nerve prostration and hysteria, which he published in the *Lancet* in 1881, and his introduction to the discussion on the same subject at the late meeting of the British Medical Association. Dr. Playfair is a firm believer in the efficiency of Dr. Weir Mitchell's "rest cure" treatment in properly selected cases, and he cites some very striking examples of cure, which he has obtained under this method. Like Dr. Mitchell, he lays particular stress upon the necessity of isolation of the patient and her removal from unwholesome domestic surroundings, and he is satisfied that any relaxation of this rule will prove an absolute bar to success.

Although Dr. Mitchell, in the introduction to his little volume on *Fat and Blood*, very modestly disclaims any thought of "putting forth anything very remarkable or original" in his treatment of neurasthenia by rest, systematic feeding and passive exercise, nevertheless, we think that the merit of having introduced it as a method unquestionably belongs to him, and we regret to see that there has been a disposition in some quarters to deny this. On this point Dr. Playfair, we are happy to find, does full justice to Dr. Mitchell, as will be seen from the following extract: "I feel proud to say that, having carefully studied what has been written on the subject, I can nowhere find anything in the least approaching to the regular, systematic, and thorough attack on the disease here discussed.

"Certain parts of the treatment have been separately advised, and more or less successfully practised, as, for example, massage and electricity, without isolation, or isolation and judicious moral management alone. It is, in fact, the old story with regard to all new things. There is no discovery, from the steam engine down to chloroform, which cannot be shown to have been partially foreseen, and yet the claims of Watt and Simpson to originality remain practically uncontested. And so, if I may be permitted to compare small things with great, will it be with this. The whole matter was admirably summed up by Dr. Ross, of Manchester, in his remarks in the discussion I introduced at the meeting of the British Medical Association at Worcester, which I conceive to express the precise state of the case: 'Although Dr. Mitchell's treatment was not new in the sense that these recommendations were made for the first time, it was new in the sense that these recommendations were, for the first time, combined so as to form a complete scheme of treatment.'"

A TREATISE ON THE SCIENCE AND PRACTICE OF MEDICINE. By ALONZO B. PALMER, M.D., LL.D., Professor of Pathology and Practice of Medicine, and of Clinical Medicine in the University of Michigan, etc., etc. Vol. II. 8vo. pp. 866. New York: G. P. Putnam's Sons, 1882.

THE second volume of Dr. Palmer's work is now offered to the profession. It claims in many places to represent, as does the preceding volume, the special indications of American practice. The author is, indeed, convinced that many methods of treatment so successful in Europe, are not suitable to our climate, our habits of life, and in fact, to our constitutions. Moreover, he has remarked that statistics abroad are based mainly upon the results of hospital treatment, or upon what is the direct outcome of consultant practice, and are not, as they should be, the matured judgments of close attendance day by day, from the beginning and in private practice of each individual case. In consequence of these facts, many phases of conducting cases which appear reasonable and judicious to our European brethren, are to us antiquated and irrational. The second volume of this extensive treatise is not unlike the first in the general characteristics. Many subjects are described and but few omitted which should be contained in a work on general practice. Some portions of the work are tolerably satisfactory in details, and particularly those which relate to affections of the respiratory tract. In his exposition of nervous diseases, the author betrays, we believe, a want of familiarity with their protean clinical aspects as well as with their minute morbid changes, which can but lessen the value and importance of his teaching. Here and there throughout this work, we encounter practical hints of considerable value in the management of cases, and certain therapeutic combinations recommended by the author are worthy of remembrance.

The pathological part of the second volume shows, we regret to say, rather the research of a gleaner in others' fields than that of one who has steadily worked upon a fruitful soil with the desire of making personal acquisition. The style throughout this volume is not invariably what is admirable, and occasionally we find the author betrayed into using expressions which are both lax and personal; such defects of writing should be remedied in another edition of the work. As a guide for students, we can scarcely recommend Dr. Palmer's work, since in those of at least two well-known American authors, we have works either of higher scope or more lucid exposition. To the general practitioner there are some paragraphs here and there which can be advantageously read and perhaps become the origin of well-considered practice.

A STUDY OF THE TUMORS OF THE BLADDER, WITH ORIGINAL CONTRIBUTIONS AND DRAWINGS. By ALEX. W. STEIN, M.D., Surgeon to Charity Hospital, Genito-urinary and Venereal Division. 8vo. pp. 94. New York: William Wood & Co., 1881.

THIS monograph opens with a valuable collection of one hundred and fifty-five cases of tumor of the bladder, and then furnishes an excellent description of the benign and malignant growths which have their origin in this organ.

The chapters following, devoted to the consideration of the symptoms, diagnosis, and treatment of vesical tumors, cannot fail to impart to the reader much valuable information upon this very interesting class of cases.

Upon the question of treatment, the author not only expresses himself decidedly in favor of early operative interference for the removal of benign tumors, but also thinks that in many cases of malignant growth this procedure offers a reasonable hope of temporary, if not of permanent, relief.

In this statement, we think, the author only expresses the sentiment of the profession at the present time, which look with growing favor upon operations for the removal of these growths; for the results of the various operations to accomplish this object, both in

cases of males as well as in those of females, have been sufficiently satisfactory to insure its position as a justifiable surgical procedure. Although exception might in some places be taken to the author's style, yet a perusal of this work cannot fail to waken a new instinct in, and give the reader a clearer idea of the diagnosis and management of this interesting, but distressing class of cases.

SOCIETY PROCEEDINGS.

MOTT MEDICAL CLUB, OF PITTSBURG.

Stated Meeting, January 8, 1883.

DR. WILLIAM WALLACE IN THE CHAIR.

DR. J. CHRIS. LANGE read a paper entitled

SOME CASES OF DIPHTHERIA TREATED BY MERCURIALS.

He said our knowledge of the action of mercury on the system may be defined, briefly, as follows: its effects are chiefly owing to a corrective influence on the quality of the circulating fluids, first—and, secondly, it is generative of more or less complete processes, antagonistic to, or substitutive of, diseased action or abnormal processes. Under its influence the secretions and exhalations are increased, the textures softened, morbid growths and deposits are removed, or their increase more or less perfectly hindered. Visceral and glandular enlargements diminish or disappear, phlegmonous inflammation of every kind is opposed, and in all inflammations hyperinosis is diminished, the red corpuscles are less inclined to aggregation, and the white ones to adhesiveness. The exudation of plastic lymph is limited, and, as a consequence, also the formation of false membranes. Further, mercury softens and destroys the tissues, impoverishes the blood, interferes with nutrition, and produces a condition of marasmus and cachexia.

In the consideration of the mercurial treatment of diphtheria—as in any other—the question arises: What do we desire to effect by the administration of the chosen remedy? The answer to this is that by its exhibition we desire to so modify it—the poison in the blood—and to so limit its pernicious action on the system, together with its product, that the patient may live during its continuance. It is proper to inquire, then, what are the events which, in diphtheria, threaten to terminate life; in other words, what are the causes of death, and also, what influence has mercury on them?

The six cases to be presented for consideration are the most unfavorable of a series of forty-three cases, treated by mercurials during the last two years. The other thirty-seven cases recovered, as they probably would have done under other reasonable treatment, as we have had, fortunately, no very malignant epidemic during this time. The six cases were such, as under other various plans of treatment formerly employed by me, almost invariably proved fatal.

The poison itself may be a cause of death; this may be so virulent, that life is incompatible with the blood that contains it, and the patient dies as soon as the unknown chemico-vital changes in the blood are sufficiently complete.

Case I.—E. S., female, aged 13 years, Coal Hill, South Side. First seen on the morning of February 12, 1882. Temperature 105°, pulse 140; extremities cool; had vomited once during the night, and complained of sore throat the day before, but had not seemed very sick. Membrane on tonsils; cervical glands enlarged, and cellular tissue infiltrated about the throat. She is restless and stupid; moans and tosses about in bed; she had passed a normal amount of urine, and had an evacuation of the bowels that morning; her abdomen was tympanitic. The next morning she had a collar of brawn; great tympanitis; congested conjunctivæ, and was comatose; she died at 2 P. M., that second day. I may mention her treatment, not as illustrative of either good or harm, for none could have controlled or even modified the action of the quantity or virulency of the poison she had received; it was 10 grains of calomel every hour, with ice to the throat, and stimulants.

Another cause of death, is the exudation of the membrane upon the mucous surface of the larynx, trachea, or both; with the tumefaction of the tissues beneath and about it. What can be expected of the mercurial treatment in this condition? It is freely asserted here in our city, that benefits impossible to be attained by other methods of treatment, are its results; and the cases related below would seem to agree with the assertion. If it be true that the membrane accompanying the laryngeal inflammation, and the tumefaction of the underlying structures be only in the least diminished, this would be of the greatest importance in this particular situation of the inflammation; and is it unreasonable to grant—with the knowledge that mercury opposes hyperinosis, and limits the exudation of coagulable lymph—that it may also do this in diphtheria, thus limiting the size and thickness of the membrane, and moderating the inflammation? If the obstruction of the air passage be sufficient to give rise to urgent symptoms of asphyxia, surgical measures will remove the patient from this danger to life, and expose him to another, to be mentioned further on. An interesting question is, what determines the inflammation to the larynx in one patient, and not in another? It is not the intensity of inflammation, nor the duration of the disease; for we see in one patient, the faucial membrane reproduced one or more times, the larynx remaining exempt; and again, the larynx involved before the detachment of the first faucial membrane, or, if true croup be diphtheritic, without any faucial membrane. With the fact at hand, that a certain individual will, from cold or exposure, take a tonsillitis, and another a laryngitis, and yet another a coryza, it is fair to assume that the surface selected by a diphtheritic deposit is determined by the same force.

On the 13th day of April, 1881, I was called to attend a girl seven years old, living on Stanton Avenue. She had had faucial diphtheria five days, the membrane was now being detached, and she had croup since the day before. She had been treated by a homœopath, who had left the case with the statement that she could not live ten hours. I gave her ten grains of calomel every two hours for twenty-four hours. On the 14th, the following day, dyspnœa was extreme, the extremities cool and blue, as were the lips; spasm of the glottis was frequent, and left her wet, cold, and blue. The treatment was continued until the morning of the 15th, when a slighter degree of dyspnœa being perceptible, the quantity was reduced to five grains. During the forty-eight hours in which she had taken four drachms of calomel, she had three stools. She continued to improve, and, on the 19th, the sixth day, her larynx was clear and her voice restored, when treatment ceased. She was slightly ptyalized; she had taken one ounce of calomel. After the first forty-eight hours her bowels had not moved; she had no sequelæ. On September 11, 1882, this same patient was again attacked, she was now eight years and five months old. Temperature 104½°; pulse 120; membrane on both tonsils and posterior pharyngeal wall; ten grains of calomel were given every two hours for forty-eight hours; bowels moved once. On the 13th, the third day, temperature 102°; pulse 120. From 13th to 17th, five grains every two hours.

From 11th to 17th she took one ounce. Bowels not having moved since 12th, a spoonful of castor oil was given, and the mercurial continued. This patient would take absolutely no nourishment of any description, and very little water. 18th, membrane almost gone from fauces; slept all night except when disturbed to take her powders; had two evacuations of the bowels, and took the first spoonful of nourishment this morning. 19th, temperature 102°; pulse 130; a new membrane forming on fauces; ⅛ grain corrosive sublimate every two hours; calomel discontinued. 20th, temperature 101°; pulse 140; membrane larger and thicker than the first; patient exhausted; will not take spirits, nor meat extract, nor quinine, nor milk. Nasal and laryngeal mucous membranes free from the inflammation, Has always passed urine. Died on the 21st, of exhaustion.

This patient took absolutely no nourishment from the onset of the disease, and emaciated remarkably during the first few days. The history of these two attacks of this patient demonstrates, 1st. Either that the mercury exhibited early in the second attack prevented a laryngitis, which occurred during the first attack, before she had had mercury, or that a laryngeal inflammation, in diphtheria, is entirely accidental, and not determined by any idiosyncrasy as is the simple inflammation of the larynx, tonsils, or Schneiderian membrane, from cold or exposure; and next, that mercury is not a specific for diphtheria. This patient certainly had a sufficiency of it; one ounce and two drachms of calomel, and two grains of the bichloride; and the formation of a second membrane demonstrates that it entirely failed to control or modify the virulency of the poison. And, thirdly, in this aspect of the matter, namely, that the disease was not favorably influenced by the treatment, it is a justifiable conclusion that the treatment she received during her first attack may have had nothing to do with her recovery. This patient died of exhaustion; there were no complications, nor was there any other cause of death. I was at the bedside when she died. She was conscious, and asked for water; to give her this I raised her up, when her heart failed and I laid her down dead. It is proper to inquire how much, if any, of the direct cause of her death, exhaustion, was contributed by her treatment; this will be spoken of further on.

Another cause of death is uræmic poisoning; this is a rather rare occurrence in diphtheria, as rare as albuminuria is frequent, and this latter is rather a matter of scientific interest than of practical importance. It is not an unfavorable prognostic sign, and requires no special treatment.

Another cause of death, also rare, is said to be "blood poisoning"—secondary blood poisoning, from absorption from the affected surface. When in a certain patient, about to die, this absorption is said to have taken place, its signs and symptoms are so indefinite and mysterious, and so complicated with the signs and symptoms of the primary poisoning, that it must be confessed a gratuitous assumption; it is not indicated by the signs and symptoms of septic or purulent absorption in other conditions.

Another cause of death is when the membrane forms in the nares. This nasal diphtheria, especially when preceded by a deposit on the fauces, is very fatal. This is sometimes accredited to the, I think, erroneous assumption that the inspired air, passing over the affected surface to the lungs, is impregnated with the exhalations, and, perhaps, the special poison of this surface, or that there being so much surface in this situation (anterior and posterior nares), the membrane becomes correspondingly large, whereas, the truth is, these patients do not breathe through the nose—the nares are effectually closed, except to forced efforts; and there is no evidence to justify the belief that the soil in the nares is more favorable to the growth of the membrane than that in the pharynx or larynx; indeed, from its rarer occurrence here, it may be asserted to be less so. What so largely contributes to the exhaustion is, it seems to me, that these patients must keep their mouths open; and with their mouths open they are never in a state of rest, but in a state of continuous muscular action; this constantly disturbs the patient during sleep; he falls asleep, his mouth closes, want of breath wakes him up, he cannot open his mouth while asleep, and this recurs every few minutes; hence, I have found it beneficial to insert between the teeth a pencil, or other suitable object, that his muscles may relax, and he may still breathe. This closure of the nares is also an additional impediment to his swallowing. The air compressed, during the act of swallowing, exerts a painful pressure on the pharynx and posterior nares when it cannot escape through them. Again, when the nares are closed, the blood retains more carbonic acid and obtains less oxygen, it requires an effort to breathe, and an effort to breathe, under any circumstances, implies imperfect oxygenation of the blood; a person running breathes with an effort, because of this; a person with pulmonary emphysema might breathe faster, and so perfectly oxygenate his blood, but as this would be a voluntary act, and would require an effort, he does not do it—cannot do it long—and so exists with the least amount of oxygen, and the greatest amount of carbonic acid, compatible with his particular status of health; and the same is true of the patient with nasal diphtheria. These seem to me the principal circumstances that contribute to the fatality of nasal diphtheria.

On the 26th of April, 1882, I saw a boy, 4 years old, and on the next day a girl, 7 years old, living in the same tenement—98 Mulberry Street—both with nasal diphtheria, following the faucial membrane by a day or two, In the 7-year-old the membrane was visible in the anterior nares; in the 4-year-old it was not so. In both cases the nostrils were filled with muco-pus, which freely dribbled down upon the mouth unless cleansed away. They both lay with open mouths and red conjunctivæ, and it was with great difficulty any nourishment could be administered; they were both stupid; ten grains of calomel were given every two hours for four days, this being one ounce for each. A small stick wrapped with canton flannel was placed between the teeth. The 4-year-old had but one or two stools daily, but the 7-year-old was violently purged during the first twenty-four hours; she was accordingly given ten grains of bismuth with ten drops of U. S. P. solution of morphia after each powder of calomel; this was discontinued on the third day, as she was no longer purged. On the sixth day they were both rather better; the 4-year-old now refused to take his powder, and was given one-eighth of a grain of corrosive sublimate every three hours, instead of five grains of calomel which the 7-year-old was still taking. They continued to improve from day to day, and on the 4th day of May the nares of both were clear. They were both slightly ptyalized—but very slightly; they got no treatment for this. I desired in their cases to use the mercurials only and energetically, and succeeded. They received no iron, quinine, potassic chlorate, nor stimulants. I ceased attendance on the 7th of May—the twelfth day. The girl had no sequelæ. On the 15th I was again called to see the boy—the 4-year-old—who had, not paralysis, but contracture of the flexors of the extremities. His gastrocnemii were so contracted that his toes were on a line with his legs, his forearms were strongly flexed on his arms, while his fingers were clamped into the palms of his hands, which were flexed on the wrist and which he could not

use. It was with difficulty that his hands could be opened and his forearms extended. Believing this to be a temporary condition only, I gave him no treatment for it, and it gradually disappeared during the next ten days. These children are both well at this writing. I may mention that, as a matter of cleanliness, a weak solution of carbolic acid was used to wash out the nares, by means of a Davidson syringe. During the nine days of treatment these children took—the 4-year-old, one ounce and two drachms of calomel and two and a half grains of the bichloride; the 7-year-old, one ounce and five drachms of calomel.

As illustrative of the tolerance of mercury in diphtheria, the following case is of interest:

Babe, 11 months old, was brought to my office on the twenty-second day of August, 1882, with a diphtheritic membrane on its fauces, and the usual signs and symptoms of laryngitis. It was voiceless, had dyspnœa, cool extremities, and a hot head, with spasm of the glottis on coughing; it had been sick three days. It took five grains of calomel every hour. After a few days it improved; it nursed better; its dyspnœa diminished; it gained in strength, and soon began to expel membrane; its bowels were never moved more than two or three times in twenty-four hours; and its voice returned. It took this quantity of calomel seven days and twelve hours, making one ounce and seven drachms; and it sat upon its mother's arms, looking cheerfully around the room; no evil effect of the mercurial was visible; it died on the ninth day, from—as its mother says—a choking spell. A piece of membrane, from its trachea, probably—for its voice was restored—was so lodged by a cough as to occlude the air passage. There is no doubt in my mind that this accident alone caused its death. It was comparatively well, coughed, got blue, and was dead before I could get there—nine doors from my office. It will be admitted that this case may be counted as a cure of diphtheritic croup; and that the mercurial could not have been, in any manner, causative of nor contributive to its death.

The deleterious effects of mercury were not visible in any of these cases, not excepting the eight year old girl, who died of exhaustion during her second attack. I believe the mercury contributed nothing to this exhaustion; 1st, because it did not purge her; next, because there is no evidence to prove that mercury impoverishes the blood, interferes with nutrition, or produces a state of marasmus or cachexia, except it be given for a long period of time, as is done for chronic disease; and 3dly, when it is remembered that our experience of cases, where, on the eleventh day a new faucial membrane is completed, and that will not feed, cases that have not been treated by mercury, but by any method you please, when it is remembered that our experience of such cases is always disastrous—it is not warranted by the facts to conclude that her treatment was in any degree contributive to the death of this girl.

The quantity of the medicine administered to these patients may have been excessive, not for their tolerance of it, but because it seems impossible it should be absorbed; this may be true—I do not pretend to know, and I do not give so much in fair cases, *i. e.*, cases such as have recovered under other plans of treatment I formerly employed. I see no reason to give an infant much less than a child of 4 or 6 years, because, the younger the child the less likely it is to be purged. I prefer the mild chloride, because pouring it upon the fauces may have a local effect, as it has in other conditions. The bichloride is more easily taken. I have four cases in the same family under this treatment at the present writing; they are what I have designated as fair cases, cases that under the treatment I formerly employed, would probably recover—they are 4, 6, 9, and 11 years old respectively, and are taking five grains every three hours, with a grain of quinine thrice daily. They will continue this until they have taken two, three, or four drachms, or until their membranes are gone, or going, or until their gums show the effects of the remedy. These four cases are not included in the series of forty-three cases. Sometimes I give four drachms rapidly and then change to quinine, or quinine and the tincture of iron, with or without stimulants. The salivation that occurred in some cases, has never been of any gravity; they complained of sore mouth, but it has not been bad enough to prevent eating or nursing. The six cases related to you were, as I have said, such as under all other methods of treatment, I have been accustomed to see die; for this reason they received this remedy in such quantity.

Exhaustion is the direct cause of death, in the great majority of those who die of diphtheria. It is to this danger that the surgeon exposes the patient, when, by a tracheotomy, he rescues him from that more immediate one, asphyxia. It is to exhaustion, also, that the necessarily perturbating treatment, the induction of vicarious elimination by the bowels and skin, contributes—in uraemia; and the conditions attending nasal diphtheria, before enumerated, are also conducive to exhaustion. It is therefore necessary, to any successful treatment, to guard against the increase of exhaustion, by every possible means; food, medication, stimulants, etc., none of which need be excluded by the administration of mercury.

Although it may appear incongruous to use, at one and the same time, a supporting treatment and mercury—a sedative and antiphlogistic—this latter may become the most important factor in the restorative process; as an instance of this, drastic purgatives, generally so debilitating, are, for a patient almost moribund with dropsy and uræmia, the most powerful restoratives. It may be, that in an analogous manner, or in some unknown manner, mercury is tolerated, as well in diphtheria, as purgation in dropsy; future experience only can demonstrate if this be true, and whether it has a curative or modifying influence on the disease which outweighs its possibly injurious effects, together with its best form of administration and its proper dose.

DR. MCCANN said that a tolerably extensive experience with diphtheria, extending over a period of eighteen years, enabled him to confirm several of Dr. Langes's observations in regard to the calomel treatment. First, that calomel given in hourly doses of from gr. iij to gr. vj to children under three years old does not purge excessively, if it purges at all; that it does not prostrate even when its use is continued during twenty-four, thirty-six, or forty-eight hours; that it does not salivate; that it arrests the spread of the exudation, and causes the membrane to separate at an earlier period than do the ordinary methods of treatment; that convalescence begins earlier, and progresses more rapidly and with fewer complications; and that older children and adults bear proportionately larger doses of this remedy. His personal experience with calomel in the treatment of diphtheria leads him to believe that in the vast majority of cases, if taken early, within twenty-four or thirty-six hours after the onset, the disease is not difficult to control. It may look like "heavy dosing" to administer calomel to a child in the doses Dr. Lange has recommended, especially in the light of modern teaching, but, in his judgment, it is not so "horrible" as to sit by the bedside of a child that is slowly choking to death with diphtheritic croup; nor so horrible as to submit that child to tracheotomy in the too often futile hope that life may be saved by the operation; nor half so horri-

ble as to look in utter helplessness and despair at the livid face and swollen neck and gangrenous throat, and occluded ichor-weeping nostrils of the victim as it drifts hopelessly to death. He had tried this remedy faithfully in diphtheria, not once nor twenty times, but in more than a hundred as bad cases as he had ever seen, and it had not disappointed him where there was a reasonable hope. He had relied upon it in his own family, and when his own children seemed stricken with death. It did not fail, did not disappoint him then; nor does it ever, when given fearlessly, and persevered with to the end.

DR. MURDOCH said that he desired to enter his most earnest protest against this wholesale use of calomel in the treatment of diphtheria. His experience in its use is indeed but limited. It extends to but two cases, which were under the care of Dr. Reiter, who may justly be called the father of this practice. Of course he could not say that these two cases would have recovered under a supporting treatment, but he knows that they died promptly under the calomel treatment, which in his opinion is an exhausting treatment.

He regarded diphtheria as primarily a local disease, which rapidly becomes constitutional. The local treatment should be by antiseptics, and such means as dissolve the false membrane, viz., lime water and carbolic acid. The constitutional treatment should be by germicides, such as the tincture of iron, etc. But more important than all is the maintenance of the vital powers by alcoholic stimulants and proper diet until nature is able to eliminate the poison.

This, in brief, is the treatment advocated by Morell Mackenzie, Jacobi, and, in fact, by all the more recent authorities who have studied the subject. His success by this plan of treatment has been quite satisfactory. The use of calomel in such doses as are recommended by Dr. Lange, in a disease so exhausting as diphtheria, seems to him a step backwards. He can only explain the tolerance of calomel in diphtheria on the supposition that for some reason it passes through the system unchanged. Surely, if this were not the case, no patient could survive such enormous doses. He has great respect for the opinions of Dr. Lange, and the gentlemen who differ with him, as he had also for the opinion of Dr. Reiter, the originator of this mode of treating diphtheria, but he cannot permit this to weigh against his own experience.

DR. EMMERLING said the mercurial treatment of diphtheria, especially with large doses of calomel, is not new, but was practised in 1821 with varying results by Bretonneau. Much mischief generally ensued, when the remedy was administered until salivation, with the general effects, was produced. He has not employed calomel, but prefers and has frequently and with satisfactory results given corrosive sublimate (in dose of $\frac{1}{16}$ to $\frac{1}{32}$ of a grain every two or three hours, according to age), selecting for its employment the severer forms of diphtheria, those in which the old method of treatment gave very unsatisfactory results. He places great reliance on nourishing and stimulating treatment from the onset.

DR. RANKIN said that he disagreed with Dr. Lange. He has treated a large number of cases of all forms of diphtheria, and has employed all methods of treatment. Diphtheria is an asthenic disease, requiring supporting, stimulating, and antiseptic treatment from the beginning. Dr. Lange has given us no positive theoretical principle whereon to base his treatment, and as other remedies have yielded better results, it becomes our duty to employ them. If mercury is not a positive antiseptic, it would be preferable to leave the disease to nature, as it defibrinates the blood. Mercury and bloodletting had their advocates years ago, but because of unfavorable results they have been almost entirely abandoned.

We have all observed cases of a mild form, which mildness may be due to the presence of a large amount of vital power, which successfully resists the effect of this poison. It is, perhaps, in this class of cases that the mercurial treatment proves successful. Before employing a remedy in a disease requiring energetic treatment, we should know why we use it, and what to expect from its use. It has never been proven that mercury is antagonistic to diphtheria. Comparing the experience of prominent observers with his own, he is led to conclude that diphtheria is a local specific inflammation, and a constitutional disease. Its treatment must, therefore, be both local and general. Good results are obtained from astringents, the perchloride of iron being the most reliable. Solvents are also useful, as lactic acid, lime water, chlorate of potash, and steam. The best antiseptics are the permanganate of potash, carbolic acid combined with sulphate of iron, salicylic acid, boracic acid, quinine, sulphur, chromic acid, eucalyptus globulus, benzoate of sodium, chlorinated soda, and chloral hydrate. The diet should be concentrated and nourishing. Alcoholic stimulants must be employed boldly. I believe that alcohol is as antagonistic to diphtheria as belladonna to opium, or quinine to malaria. Patients with diphtheria will bear an amount of alcohol which, under any other circumstances, would not be tolerated.

DR. ASDALE spoke of the rapid necrosis and early detachment of diphtheritic membrane observable under the mercurial influence. The effects are recognizable usually before the end of the first twenty-four hours of treatment. Diphtheritic subjects tolerate and seem to require enormous doses of calomel, or of the corrosive sublimate; he preferred the bichloride, because of its prompt action, and because it can with great facility be administered in simple solution. To a child of five years he would give, unhesitatingly, one-eighth of a grain of the bichloride of mercury, or, ten grains of calomel, every two hours. These doses do not purge; do not pytalize; and do not interfere with alimentation. He desired especially to mention, that under no other medication in diphtheria had he found the appetite so well preserved. Occasionally, but infrequently, the gums are made slightly tender; hasty evacuation of the intestine may occur several times during the first day, but after this the bowels are moved but one or twice in the twenty-four hours; this is the rule. If the dose given of the bichloride proves excessive, vomiting will happen, and, perhaps, straining at stool; but no consequences more unpleasant; and only reduction of the dose is requisite.

Treatment must be energetic until no new exudate appears, and until the membrane already formed (if visible) is distinctly limited in its extent, and altered from its original, smooth, white, and shining appearance, to a dirty yellow, or brown color, with loosened edges, betokening a speedy separation—this will be manifest in twenty-four to forty-eight hours: the mercurial should then be withdrawn, or if continued, should be given in smaller doses for a little longer time; the corrosive chloride may now be advantageously combined with the chloride of iron, if there is severer constitutional depression, and alcoholic stimulants freely administered—this supplemental treatment will be found required *only* in the serious and protracted cases; generally, *a complete cure may be obtained in two or three days.* He urged the application of cold to the throat, if there is great swelling of the tonsils, œdema of the uvula, or tumefaction of the neighboring lymphatic glands; topical treatment he did not employ, other than cleanliness and comfort make necessary. Applications of any kind made

through the mouth or nose he regarded as generally worse than useless—to young children annoying and often a positive injury. Local medication alone can not be depended upon to do any good. If the obstruction be of the nose, or in the trachea, or larynx, we must be governed in the use of the mercury by the rational signs present, judging of each case and its needs by the mitigation or disappearance of the urgent symptoms. This assurance he could give that the remedial influence of the mercury may be confidently looked for, as a rule, within forty-eight hours from the institution of the treatment; provided, that it has been *timely* and *energetically* employed.

Dr. Asdale believed that early separation of diphtheritic membrane is accomplished by virtue of the antiphlogistic action of the agent employed; he thoroughly believed in the identity of membranous croup and diphtheria.

Experience had long since taught the medical practitioner that it is not only *not pernicious*, but beneficial and wise to employ antimony and turpeth mineral in the management of pseudo-membranous croup; the bulk of the profession has, however, yet to learn that the "alias" of the latter-named condition is diphtheria.

Medical authors and teachers of medicine, at the present time, do either ignore the subject of the mercurial treatment of diphtheria, or mention it but to slight it. Why is it so? Simply because of inexperience, because their minds are filled with the single idea of the dreadful asthenia (?) of this terrible disease, and they have not ventured to use that treatment which must, as they conjecture, but contribute to exhaustion, or, if attempted at all, it has been with a faltering, fearing hand, and hesitating thus, they have failed—and so failed to be convinced.

DR. ASDALE regarded diphtheria as a disease which (derived through contagion) must be met by early and energetic antiphlogistic measures; its course is swift; hence, if we are to be successful, it must be through the use of those agencies, which will most promptly and decidedly limit the extension of the inflammatory exudate, and which will accomplish this object with the least constitutional depression.

There is no specific cure for diphtheria; unfortunately, there are cases of the disease against which no treatment can prevail, but he believed that by the antiphlogistic (mercurial) treatment, more may be saved than by any other. He had employed this treatment, for over six years, in eighty cases; the deaths were eight. An analysis of the fatal cases would prove nothing against the treatment; they must have perished, taken as he had found them, no matter what had been tried. The deaths were all in cases of nasal and naso-pharyngeal diphtheria, except one, that a case of diphtheria of the fauces and trachea also in which death by suffocation occurred on the fifteenth day; a piece of membrane, in the act of coughing, lodged in the larynx.

The other seven deaths occurred, one on the eighth day, and one on the thirteenth; the remainder at dates varying between these: in all except two, the diphtheritic membrane had disappeared, and the fatal termination succeeded upon the development of uræmia—total suppression of urine being observed in several instances; continuing, in one case, for four days before death.

DR. LANGE, the reader of the paper, said: I am prepared, gentlemen, to hear those of you who have not employed this treatment, utterly condemn it; I did that before I employed it, and, unpleasant as it is, I can recall some cases ending fatally which, had they received it, would, it is now my belief, have terminated in recovery. I am constrained to come to this conclusion only by my employment of the treatment. I am much strengthened in my opinion of the benefits of the remedy, and of its tolerance in such doses, by the like opinion of every gentleman here who has employed it, but one, who has used it only in severe cases, and here he has "frequently used it with satisfactory results." To those of you, gentlemen, who object to the treatment, and, outside of this Club, you are of the large majority, I have to say that I cannot comply with your call for statistics—there are none. Neither can I explain the manner of the action of this remedy in diphtheria any more lucidly than you can that of the action of quinine in malaria or of mercury in syphilis.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, January 1, 1883.

FIRST VICE-PRESIDENT, DR. T. M. DRYSDALE, IN THE CHAIR.

DEATH FROM EMBOLISM.

DR. WM. GOODELL reported the death of the patient, from whom he had removed an uterine myo-fibroma. (Case reported by Dr. Baer in the discussion on Dr. Drysdale's paper, at the meeting of December 7, 1882.) The patient had progressed favorably, but some weeks after the operation, while straining at stool, she had evidently loosened a portion of clot on the proximal side of one of the venous ligatures. It passed into the pulmonary circulation and quickly caused death.

WHAT IS THE PROPER MANAGEMENT OF THE BOWELS AFTER PERINEORRHAPHY?

DR. GOODELL had recently operated for the relief of lacerated perineum, upon an insane woman who had been sent to him for that purpose from an asylum. Her insanity commenced after labor, and was probably due to a complete laceration of the perineum extending two inches up the rectum. It had always been his habit to prevent any action of the bowels during the first week after the operation. This patient, soon after coming out from the influence of the anæsthetic, tore off the bandage from her knees, removed the catheter, and by severe straining efforts secured a movement from the bowels. As she could not be controlled, laxatives were given to secure liquid stools and avoid straining. The patient walked freely about the ward from the day of operation. The Doctor expected the operation to be a failure under such circumstances; but to his surprise, on removing the sutures, he found that in the rectal portion and the important part of the perineum union had taken place.

His attention has been called by this case to the question of the advisability of keeping the bowels constipated after this operation. He intends to try the effect of laxatives in future cases.

DR. R. P. HARRIS reported the case of a woman who, after the operation of perineorrhaphy, would strain, and her efforts at defecation opened the wound to nearly its original extent. In a second operation on the same patient the bowels were kept free and union was perfect.

DR. E. E. MONTGOMERY, after operating for lacerated perineum, does not use a catheter, but allows the patient to pass her water, as he does not consider healthy urine disadvantageous for a wound. He has been in the habit of using compound liquorice powder to keep the stools liquid. He has had good success in both primary and secondary operations upon the perineum when the rectum was involved.

The following members were then elected

OFFICERS FOR 1883:

President.—Dr. Richard A. Cleemann.

Vice-Presidents.—Drs. B. F. Baer and W. T. Taylor.

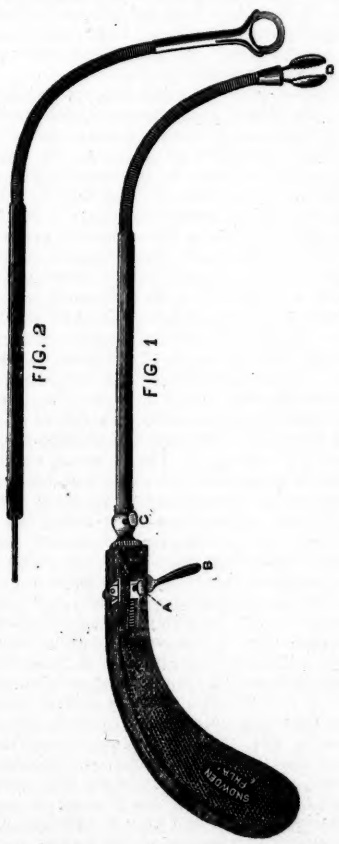
Secretary.—Dr. W. H. H. Githens.
Treasurer.—Dr. Alfred Whelen.
Librarian and Curator.—Dr. E. E. Montgomery.
Publication Committee.—Drs. John H. Packard, B. F. Baer, Elliott Richardson, James V. Ingham.
Councillors.—Drs. R. P. Harris, L. D. Harlow, Wm. Goodell, T. M. Drysdale.
Library Committee.—Drs. Horace Williams, D. M. Cheston.
Committee on Proceedings.—Drs. A. H. Smith, E. E. Montgomery.

NEW INVENTIONS.

FLEXIBLE TUBE FORCEPS AND GUILLOTINE.

BY CARL SEILER, M.D.,
OF PHILADELPHIA.

THE removal of foreign bodies and small neoplasms from the laryngeal cavity is often attended with considerable difficulty on account of the inability to reach and grasp the foreign body with the instruments at hand, even if it is plainly to be seen with the laryngeal mirror. The position of pins or fish-bones in the larynx is frequently such that a stiff forceps can not grasp them; either its blades open antero-posteriorly or laterally, and the bend or curve given to the instrument will often be found either too great or too small in a given case.



In order to obviate this difficulty, I had a Stœrk tube forceps altered by cutting off the curved portion of the tube and substituting for it a close spiral of steel wire ending in a bell-like tip. The steel wire to which the blades were attached I had replaced by a stout copper wire stiff enough to retain any course given to it, and at the same time flexible enough to allow of frequent changing of the course. The rings attached to the sides of the universal handle were replaced by a disk, so that no matter in which direction the course of the tube pointed the handle could always be held in the same position of the hand. The same change was made with the tube of the guillotine knife. This instrument I exhibited at the annual meeting of the American Laryngological Association in 1880.

The complicated nature of the Stœrk handle makes it, however, a very costly instrument and the position of the hand in holding it when the forceps or guillotine is used is rather awkward and it is difficult to hold the instrument steady. For these reasons I suggested a different handle, and Mr. W. Snowden made an instrument which answers the purpose admirably and of which the cut is an excellent representation.

The handle, made of ebony, is shaped like the butt of a pistol. The straight portion is hollow and contains a spiral spring, while it ends in a hollow central part into which the tube is fastened by a bayonet-joint and held fast by a set-screw (C. Fig. 1). The copper wire to which the forceps blades are attached, and which are seen projecting from the bell-tip at D, is fastened by the set-screw A, in a lever inserted into the handle the lower end of which, B, projects like the trigger of a pistol.

When the instrument is to be used, the handle is grasped like a pistol with the forefinger resting upon the trigger, by pulling which the blades of the forceps are drawn into the bell-tip of the spiral tube, and are thereby closed. The tendency of the spiral to elongate when pressed upon, causes a slight forward motion of the tip, this to a certain extent preventing the upward motion of the blades when they are closed, an accidental but admirable property of the instrument which facilitates the grasping of the foreign body or neoplasm in the laryngeal cavity. The flexible portion of the tube enables the operator to give it any desired curve, and simply turning the wire within the tube before its end is held in the trigger by the set-screw enables him to set the blades at any angle he may desire. It is necessary to have the straight portion of the tube stiff, as otherwise the instrument would bend close to the handle when a neoplasm or foreign body, which requires some force for its removal, is to be lifted out of the laryngeal cavity.

Fig. 2 represents the annular guillotine, which, like the forceps, can be bent to any desired curve and set at any angle, and which fits in the same handle.

CORRESPONDENCE.

THE LOCAL APPLICATION OF CARBON DISULPHIDE FOR THE RELIEF OF PAIN.

To the Editor of THE MEDICAL NEWS.

SIR: In the issue of THE MEDICAL NEWS for April 8, 1882, I brought to the notice of the profession the employment of the bisulphide of carbon for the relief of pain; the claim there advanced being that against pain neuralgic in character, the local application of this seldom used drug was almost certain relief, amelioration following in a vast majority of instances. That such a claim depends not alone on my own observations, but will stand the test of others, is shown by the following communications I have received from an independent and therefore unprejudiced observer, Dr. Alexander M. Stout, of Sussex, Waukesha Co., Wis.

Under date of January 10, 1883, he writes:

"In accordance with your request, I make the following report upon the use of carbon disulphide for the relief of neuralgic pains.

"An application of the drug was made, immediately after receiving it from New York, upon a middle-aged lady, who every week or two suffered from frightfully severe attacks of supraorbital neuralgia. I followed your directions minutely; several applications were made, but without any amelioration of the pain. The patient informed me that the medicine seemed to send darting pains all through her head, and refused to allow me to make another application. Next day she had an ugly brown patch at the seat of application, which remained a week or ten days. She is no longer one of my patients. I was somewhat disgusted.

"A short time after this, however, I applied the remedy for intercostal neuralgia upon a man, a fiddler by occupation, and who was unable to pursue his calling on account of what he termed 'neuralgia of the heart.' A physician near here had been treating him for some time for such a disease. As soon as the smarting which is produced by the carbon disulphide had subsided, he drew a long, deep sigh of relief, and with a broad smile said, 'Why, Doctor, you have cured me!' and went away protesting much gratitude. He has not since been troubled by any pain whatever.

"Since that application I have employed the drug daily, and with magical and most delightful success. I have no medicine which acts so quickly, easily, and promptly."

In a second letter he communicates the following interesting case, and brief remarks.

"Last Monday (Jan. 15, 1883) I was sent for to see one of my patients; a strong, robust man, who I have had under treatment for several days for a light attack of pneumonia. Upon reaching his bedside, he informed me that he should go crazy, wild, if he had to suffer any longer from the pain in his head, an occipital and frontal neuralgia. In three minutes he was resting quietly, entirely relieved by our remedy. I sincerely feel under obligations to you in this matter, as the drug has been so great a help to me in so many intractable cases of neuralgia, whereas, before I had the bisulphide, many patients went unrelieved and dissatisfied away from me."

After such earnest testimony as to efficiency of the drug, by Dr. Stout, comment on my part is rendered unnecessary.

Very respectfully yours,

E. SANDERS, M.D.,
Attending Physician to the Dispensary Department of Mt. Sinai Hospital.

NEW YORK, January 24, 1883.

CONFIDENTIAL COMMUNICATIONS.

To the Editor of THE MEDICAL NEWS.

SIR: A writer in THE MEDICAL NEWS of January 20th urges the adoption by the legislature of Pennsylvania of a statute of the State of New York, which prohibits a practising physician from disclosing, under any circumstances, any information which he may have acquired in a professional character, which information was necessary, on his part, for a thorough understanding of his patient's case. If I remember rightly, the legislature of Pennsylvania at its last session was asked to pass a similar law; and it would seem probable that our present legislature will be urged to enact a measure similar or identical in character with that of our northern neighbor. It would seem that, in accordance with traditional policy, New York having taken physic, Pennsylvania must be purged.

Strangely enough, the expressed desire for such a statute seems to come from members of the medical profession. I have no doubt that this feeling has its origin in an honorable and chivalrous desire to be faithful to those personal trusts that are confided to the physician by those who are the objects of his professional care; and within certain limits the sentiment is a just and proper one. But it should not be carried to the extent of depriving us of just means for our own protection, nor of making us the virtual abettors and accomplices of vice and crime. "An accessory after the fact," says Wharton, "is one who knowing a felony to have been committed by another, receives, relieves, comforts, or assists the felon," and although the enactment of such a statute might change the legal consequences of such an action, its moral effect when done for the purpose of shielding the felon from just punishment, must remain just what it has ever been deemed in the past, as detrimental to the general welfare.

The reasons assigned by the writer of the article alluded to in support of this measure are these: 1st. Where a husband has acquired syphilis by illicit sexual intercourse, he will feel greater freedom in stating all the facts of his case to his attending physician if he is aware that his medical attendant is restrained by law from testifying in court to any knowledge thus gained, thereby enabling him to escape a conviction for adultery or for any other crime committed by him as an incident of his illicit intercourse. It is claimed that the more thorough knowledge thus gained will enable the physician to treat his patient more efficiently than he could otherwise do.

It is difficult to understand how the details as to the precise time, place, and manner in which the disease was acquired, or a knowledge as to the particular person from whom it was derived, can promote the efficiency of its treatment; for this disease, in its primary character, is readily and certainly recognized by any one who is competent to treat it. On the other hand, it may well be claimed that the proposed measure would remove one of the strongest barriers which now exist against indulgence in sexual vice, and it would certainly give to it an additional protection.

The second reason assigned in favor of this measure seems entitled to still less favorable consideration than the former one. It is this: "A man in attempting a burglary is met by an excited and outraged opponent, who strikes to kill, and" (the burglar, we suppose) "receives a blow in the temporal region. There exist really a fracture of the bone and laceration of the middle meningeal artery." The criminal eluding arrest, and not understanding the gravity of his case, applies to a surgeon for treatment, and deceives him as to the nature of his injury, by a false statement as to the manner of its reception; and the loss of his valuable life is the dire consequence. "Other cases," says this writer, "suggest themselves" (similar accidents, occurring in the perpetration of rape, highway robbery, and murder would be likely to suggest themselves in this connection); but he seems to think that these are sufficient to induce the legislature of Pennsylvania, and of every State in the Union, to enact a statute similar in effect to that which now exists in New York.

If all that can be said in favor of such a measure amounts to this, that it will more effectually shield vice, and that it will more efficiently protect crime, by bestowing additional secrecy to the one, and enhanced safety to the other; that it will serve to lighten or to obviate the penalties that may be incurred by the commission of such crimes as adultery, rape, burglary, and murder, it would scarcely seem wise in our present lawgivers to hastily overturn the common law, which has hitherto so justly defined and regulated our duties in this regard, and to substitute in its place a statute

from which neither our profession nor the honest and virtuous portion of society can derive any advantage, but one whose benefits, if any, could only accrue to the vicious and the criminal classes.

Before the members of the medical profession "put their foot into it," by securing the enactment of such a statute as that of New York, it would be well for them to consider carefully the consequences which must necessarily result to themselves from its adoption. The New York statute, which it is proposed to adopt, is in the following words:

"No person duly authorized to practise physic or surgery *shall be allowed* to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon."

It will be readily seen that this law effectually prevents a physician from giving testimony in his own behalf in suits that may be instituted against himself for malpractice, as well as in suits which he may bring against delinquent patients to recover just payment for his services: and he frequently can have no other evidence by which he can establish the justice of his cause. In illustration of this point, I will briefly relate a case which recently occurred in my own practice. A resident of New York, temporarily in this city, fell or was thrown from a wagon, causing a fracture of both tibia and fibula of right leg at upper portion of lower third. On being called to attend him I made particular inquiry as to his occupation, his habits, and his previous health. I was told by him that he was an agent, that he was temperate, and that he had always been healthy. He especially disclaimed having ever had any specific disease. I adjusted his limb, secured its position by the necessary appliances, and bestowed upon him all requisite attention and care during the next forty days. At the end of that time, on removing the dressing from his limb, I was surprised and disappointed at finding that while the length and shape of the injured limb were all that could be desired, no bony union had taken place. Feeling confident as to the cause of this condition of his limb, I at once charged him with having deceived and misled me in regard to his previous health, and he promptly admitted having had syphilis a year or two previously. Upon further investigation I found conclusive evidence of the correctness of his confession. The reason which he assigned for concealing the truth, was that he supposed himself cured, and did not think it necessary to disclose to me at the time of the accident any knowledge concerning it. This was confided to me as a professional secret, and I could not prove by any testimony, save my own, that such an admission had been made by him, and I suppose that it would be utterly impossible for me to establish by any other evidence the fact which he privately admitted to me, and "*which information was necessary to enable him* [me] *to prescribe for such patient*" at that juncture of his case. As he was anxious to return to his home, I prescribed the standard anti-syphilitic remedies, encased his leg in plaster of Paris, and left him to go on his way, since which time I have heard nothing from him.

Now, supposing—just what has many times occurred to others—that I should be required to respond to a suit for damages for failing to procure the usual bony union in this man's broken leg (and as the fellow left without paying me a dime for my services, he may yet, in accordance with established precedent, attempt to compensate me by such a procedure), then this much lauded New York statute, if operative in Pennsylvania, would effectually debar me from making a successful defence or of establishing before a court the facts that would be necessary to a proper understanding of the case. One of those conscienceless shysters who especially exult in the winning of an unjust cause, with this New York statute before him and in force, would find in the facts which I have stated, all the necessary materials for a promising suit for malpractice. A professional friend and fellow-townsman, and one of the most worthy and competent surgeons of our State, is now a defendant in a suit for civil malpractice. The situation is such that he will be compelled to depend largely on his own testimony for his defence. This New York statute would effectually close his mouth, and leave him an easy victim to his prosecutors.

As to the ethical obligations of physicians to their patients, I believe that this has generally been observed to as great a degree as either good morals or sound policy would dictate, and that these had better be left, as in the past, to the moral sense and honorable instincts of the members of the healing art—leaving each one to judge for himself in every case just what are his duties to his patient, and what are his obligations to the State.

The better elements of society would in no wise be benefited by the enactment of the proposed measure; our profession would gain nothing in dignity, character, nor honor, and might lose much in reputation and purse; and the only advantages resulting from it will accrue to the devotees of vice, the perpetrators of crime, and the promoters of suits against medical men for civil malpractice. These interests deserve no additional protection, and society can illy afford to invest them with any additional safety and strength.

Against the adoption of a measure so detrimental to the better interests of society, and so fraught with injury to the medical profession, I desire to enter my sincere and earnest protest.

Very truly yours,

JOHN B. CRAWFORD, M.D.

WILKES BARRE, January 22, 1883.

NEWS ITEMS.

BOSTON.

(*From our Special Correspondent.*)

THE CHILDREN'S HOSPITAL.—The Children's Hospital, now in its fourteenth year, has just moved into a new and handsome building, erected for the purpose at a cost of about $40,000. Heretofore the hospital has occupied a large dwelling-house, which latterly became too contracted for the needs of the institution.

To Dr. Francis H. Brown, of Boston, is due the foundation and organization of this charity. He was greatly assisted by the influential aid of the late Dr. Chandler Robbins, whose eloquence opened the purses of the wealthy men of Boston, and to this fact is due the large meed of praise given to Dr. Robbins. But it is undoubtedly true that the plans and ideas gathered by Dr. Brown while in Europe were the seed-germs of this hospital. And he is still not only actively engaged in its development, but, as Secretary of the Board of Management, he has been untiring in perfecting the arrangements and suggesting many of the conveniences of the new building. It stands on the new land (Back Bay) at the corner of Huntington Avenue and Camden Street. It is a sightly structure of brick, composed of centre building with wings, only one of which is as yet completed. Out of the large entrance hall intersecting passages lead right and left to the wings, which are two-story pavilion wards; the lower story in the completed wing is occupied by the boys. Walls are tinted, hung with pictures. Tables in the centre are used for the children's books and toys. The little fellows have an adjoining dining-room supplied with

low tables and chairs. Beds are of iron, of convenient pattern. Floor of hard wood. Abundance of sun and light make the ward as cheery as out-of-doors. At one end is a section called the "sun-room," into which sunlight pours all days. The floor is underlaid with steam-pipe. Heat and ventilation are admirably managed, and so arranged that fresh air will enter from either side, according to the direction from which the wind is blowing. This is controlled by means of valves.

Bath-rooms have marble floors. All plumbing and piping are open throughout the house. An excellent idea. The building is finished interiorly in ash. The girls' ward is directly over the boys' room, and corresponds in all ways. On the lower floor and in basement of the central building is a fine operating-room; roomy dispensary; an ether-room, where patients are prepared for operations; an accident-room; a plaster-room, where casts are made and plaster jackets applied; a splint-room, in which the surgeons may modify and invent apparatus, a smith being employed and all tools at hand; also laundry, kitchen, and sitting-room for the sisters who act as nurses. In each ward dining-room is a medical closet for the ward. There are also diet and ward kitchens. Nothing in the way of convenience has been forgotten.

On the second and third stories of the central building are handsomely furnished rooms, to be used privately for mothers who may wish to come with sick children and pay board. One floor is devoted to contagious diseases. It is completely shut off from the rest of the house, and can be reached from without the house by a passage which protects the hospital from all possible exposure. The walls of the whole house have four coats of hard paint and one of varnish. The whole is as perfect as modern science can make it, and may justly be regarded with pride.

HOSPITAL FOR INCURABLES.—A new institution has recently been inaugurated—a hospital for incurables, under the charge of Dr. Hamilton Osgood. This supplies a want which has been bitterly felt. In Boston incurables are not admitted to the large hospitals. Until now there has been almost no refuge for the incurable among the poor, and what to do with them has been a painful difficulty. The response to an appeal for funds towards this object has been quick and generous. The hospital is located in one of the suburbs, a few minutes' drive from the city, in a sunny and healthful spot, and at present occupies a large and handsome cottage, capable of accommodating twenty-five patients. This is a nucleus of what undoubtedly will become a large institution, for incurables are many. Every city requires a similar home for such of its poor incurables as could not, with propriety, be sent to an almshouse.

CHAIR OF ANATOMY AT HARVARD.—Dr. Thomas Dwight is giving satisfaction as a substitute for Dr. Holmes, during the remainder of the current year, at Harvard Medical School. One can easily imagine the difficulty of sustaining this position when suddenly called to it without sufficient preparation in the way of models, plates, etc., especially in the middle of a term.

CHICAGO.

(*From our Special Correspondent.*)

THE NEW COLLEGE OF PHYSICIANS AND SURGEONS has become involved in a singular, probably unparalleled lawsuit. Three students who had attended the last spring course at the Rush Medical College, entered this winter at the new College with the hope of graduating at the end of the term. This hope was based, as they allege, upon a definite promise on the part of Prof. A. Reeves Jackson, with the approval of Drs. Rea and Carpenter, that they should be admitted as senior students, and entitled to the final examinations at the end of the term, although they had only studied one spring term at another institution. At any rate the students are in possession of matriculation tickets admitting them to the senior class. Prof. Jackson admitted that he had given the promise to let them apply for graduation at the end of the term, but had done so without full knowledge of all the facts. The Faculty, however, concluded to abide by the rules of the State Board of Health, and refused to admit to the final examination any student who had not taken two full courses of lectures in some medical college. They hence offered these students to refund their fees. The latter, however, refused to accept them and have sought redress in the courts. One of them, M. I. Hendrix, has begun a test-case, in which he sues the Faculty for $5,000 damages for violation of contract.

CANADA.

(*From our Special Correspondent.*)

PUBLIC HEALTH.—The Dominion Government has acted upon the resolutions presented by the Convention, held a few months ago in Ottawa, and organized a system for the collection of vital statistics in the principal cities.

BODY-SNATCHING IN MONTREAL.—As previously mentioned in THE NEWS, a considerable proportion of the subjects supplied to the medical schools here are "raised." The practice has prevailed this winter to a greater extent than usual, owing to the larger number of medical students in the city and the high price paid for subjects by the demonstrators, in some cases as much as $30 apiece. Not a week passes without reports from the small towns and villages that the vaults have been broken and the bodies stolen. In some instances the relatives, with the aid of a detective, are able to recover the corpses, but in the majority of the cases they are hidden away and not put on the tables until the search is over. Public opinion is aroused and the matter is again before the legislature, but nothing will be done to remedy matters until the various asylums and poor-houses receiving government aid are compelled to send the unclaimed dead to the colleges.

LONDON.

(*From our Special Correspondent.*)

THE LONDON MEDICAL SOCIETIES.—The Christmas vacation is over, the medical schools have reassembled, and the various medical societies are hard at work again. The Pathological and Clinical Societies have recently held their annual meetings for the election of officers and other formal business. In these societies, as in the older Medical and Chirurgical Society, the chairman holds office for two years, and a physician and surgeon are elected alternately. The late President of the Pathological Society—the most largely attended of all—was Dr. S. Wilks, Senior Physician to Guy's Hospital. He is, of course, well known in America as the author of a *Handbook on Pathology*. He has long been a most arduous worker in this field of inquiry, and was one of those to establish beyond question the existence of visceral syphilis. The new President is Mr. J. W. Hulke, Senior Surgeon of the Middlesex Hospital, and Surgeon to the Moorfield's Ophthalmic Hospital. He is a very worthy successor to Dr. Wilks, for although not so widely known as many others, there is no man more thoroughly well informed on all the scientific branches of the profession than he. The Clinical Society has been presided over for the last two years by Prof. Lister. When he was elected he was a comparatively new member of

the Society, and had not attended its meetings, and some disappointment was felt and expressed by some who had served the Society from its foundation at having been passed over. Indeed, Mr. Lister's election has caused some two or three old members to absent themselves from the meetings for the past two years. But in spite of that, Mr. Lister's presidency has been a very successful one, and there can be no doubt that it has reflected far more honor upon the Society than upon himself. The Clinical Society is the youngest of our London societies, and its action in thus seeking out its most distinguished member to be its President, irrespective of the date of his membership, is a sign of its healthy life. The fact, moreover, is an indication of the honor in which Mr. Lister is held by the younger members of the profession, while among his seniors there is a tardiness in accepting his antiseptic treatment of wounds. Dr. Andrew Clark, of the London Hospital, a physician in large practice, who attends Mr. Gladstone, and is one of our medical orators, is the newly elected President of this Society.

AT THE MEETING OF THE CLINICAL SOCIETY ON JANUARY 12TH, DR. COXWELL exhibited a child, aged thirteen, with symptoms resembling those of *Myxœdema*. Until eight years of age she differed in no way from other children, and could read a chapter out of the Bible or a story as well as her mother; could write, and learnt arithmetic. A great change then came over her. She would often fall asleep, even when eating her meals, her memory became defective, and if sent to do anything she would wander about in an aimless fashion. Later her speech became thick and indistinct; she suffered from headache, her head drooped forward on her chest; her hands and feet became very cold; her legs became weak and her gait unsteady. She was lately a patient in the National Hospital for the Paralyzed and Epileptic, under the care of Dr. Hughlings Jackson. The appearance of her face is very suggestive of myxœdema, her skin being translucent, with a circumscribed patch of redness in the centre of the cheeks, the lower eyelids swollen, the nose broad, the eyes prominent and heavy looking. The limbs are slender and well formed. The thyroid gland seems diminished, and there are no abnormal fatty tumors in the region of the neck or elsewhere. While under observation her temperature was frequently as low as 95.6°. She was often extremely restless at night, and had frequent attacks of screaming. Her power of speech became worse, till at last she could hardly utter a single sound, the lips being seen to move ineffectually when she attempted to do so. She could not kiss her mother nor puff out her cheeks, and her food would often remain seven or eight minutes between her teeth and lips. There was a general overclouding of the intellect. Dr. Coxwell drew attention to the fact that very pronounced mental disease has been reported in myxœdema, and that Dr. Ord has had a patient suffering from that disease with marked affection of the bulb, a point of similarity with the present case of some importance. If the case was one of myxœdema, it was of interest as being the first recorded in a child. If it was one of simple imbecility, it was remarkable on account of the bulbous symptoms and the likeness it bore to myxœdema. The arguments in favor of sporadic cretinism were few, and outbalanced by the absence of most of the characteristics of that disease.

MR. J. N. C. DAVIES-COLLEY read notes of a case of *Enormous Enlargement of the Lower Lip Cured by Operation*. Richard B. D., a clerk, aged 36, was admitted into Guy's Hospital in August, 1881, with a remarkable swelling of the lower lip. Fourteen years before he had a chancre on the penis, followed by soreness of the tongue and swelling of both lips, especially the lower. There was never any rash on the skin. He was a very great drinker. The lower lip was of enormous size, everted, and pendent, so that its border was on a level with the tip of the chin, while the lower teeth were in front completely exposed to view. The mucous membrane was fissured in parts, but otherwise natural. The tissues were a little firmer than usual, but not at all indurated. There was a little tenderness on pressure. From side to side it measured 3 inches, from above downwards 1¼, and in thickness ¾ of an inch. The upper lip and tongue showed signs of chronic inflammation. There was no enlargement of the adjacent glands. He left off smoking, and was at first treated with antisyphilitic remedies. The mucous membrane became more healthy, but the lip remained the same size. Some reduction was then effected by pressure between thin strips of wood. The lip became smaller and flaccid, but was still morbid and pendent. On November 8th a V-shaped piece was removed from the centre of the swollen lip, and a rapid recovery ensued. When last seen he had no longer any eversion of the lip, which had assumed a perfectly healthy and normal aspect. Mr. Davies-Colley brought the case forward as a striking example of the enlargement of the lip which occasionally results from chronic inflammation. There was nothing in the patient's family history to indicate a scrofulous tendency. The evidence of secondary syphilis was doubtful, and there was no record of mercurial salivation. On the whole, Mr. Davies-Colley was disposed to attribute the disease primarily to syphilis, and secondarily to the constant irritation of the inflamed surface by excessive smoking. The case was also interesting on account of the success which followed excision of part of the lip, after the more or less complete failure of other remedial measures.

MR. CLEMENT LUCAS had seen this case, and bore testimony to the excellent result obtained. He thought that any chronic ulceration might produce such hypertrophy, as was seen in struma. But he suggested that the internal use of mercury might have had some effect in its causation.

DR. HADDEN said the case appeared to resemble cases of lymphatic obstruction of the tongue described by German authors—the microscopical characters bore out that view.

MR. LISTER remarked on the fact that removal of a portion of such chronically indurated tissue is often followed by recovery of what is left behind, and instanced what is seen in operating on lipoma nasi, and hypertrophied tonsils.

MR. DAVIES-COLLEY thought that the tension of the parts and the correction of their pendulent position explained the recovery of the unexcised portions of the lip. There were no enlarged glands, or any other direct evidence of lymphatic obstruction.

MR. H. GOLDING-BIRD then read a paper on a *Successful Case of Transpatellar Excision of the Knee*, which he had previously shown to the Society.

The operation was on the person of a lad, æt. 13, fairly healthy himself, but with a family history of phthisis. There was a year's history of articular ostitis of the right knee, with pulpy disease. Excision was eventually performed on May 9, 1882. It differed from an ordinary excision in that the transverse incision was made across the middle of the patella, which was then sawn in two; the two fragments, with the soft parts, being bound up and down. The excision was then completed as usual, the articular surfaces of the tibia and femur being removed. Some pulpy thickening was removed from the under side of the patella, and when the limb had been straightened two car-

bolized silk sutures were passed through its substance, and so its two fragments were united.

Primary union was obtained, and nothing more was seen of the patellar sutures. Until September 12th, he walked about with a stiff bandage at the knee, and with crutches; after that date he was ordered to discard all support. He has a movable patella and half an inch shortening. He has all the advantages of retaining the patella; but besides that, there is a gain by this method of operating, since the surgeon can freely examine and manipulate the joint—more freely, indeed, than where, with the idea of retaining the knee-cap, the lateral incisions are employed. Two great advantages remain to the patient by keeping the normal attachments of the patella. The quadriceps opposes the hamstrings, and so does away with the necessity of employing a stiff bandage for years to prevent posterior displacement of the leg; the rectus femoris, considered as arising below, has its full play upon the trunk in preserving equilibrium, whilst it also allows of the perfectly natural forward motion of the limbs in walking, and this last is not the case where the ligamentum patellæ has been solidified.

MR. GANT thought that when excision of the knee was required, it was rare to find the patella free from disease; his results after removal of the patella had been very good.

MR. CHRISTOPHER HEATH agreed with Mr. Gant, and thought that when the patella remained free from disease it afforded an argument against excision. Mr. Golding-Bird's case was undoubtedly very successful, but it was probably capable of other treatment, and excision at such an age usually interfered seriously with the growth and utility of the limb.

PROF. LISTER said that Volkmann had advocated this operation many years before. In cases without sinuses he should think it good, if the operations were conducted aseptically; but if he thought only of the old method of conducting the operation, he should agree with Mr. Gant and Mr. Heath. He had had many successful results in cases like Mr. Golding-Bird's from free antiseptic incision into the joint, with gouging out of carious bone, and scraping away of diseased synovial membrane; getting even movable joints.

THE COLLECTIVE INVESTIGATION COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.—An attempt is being made in this country by the British Medical Association to obtain information on the etiology, natural history, and treatment of disease, from the large body of practitioners scattered over the country. With this object, a committee for the collective investigation of disease has been formed, and Dr. Mahomed has been appointed secretary. The committee has just issued a letter asking for reliable information bearing on the contagious nature of phthisis. A meeting is to be held in London this week, at which Sir James Paget and Sir William Gull are announced to speak on this subject. Those who have been engaged in general family practice will appreciate the extreme difficulty there is in obtaining from it reliable scientific data. It is also well known that while in "union is strength," in "numbers is weakness." Each fresh observer introduces new possible sources of error in observation; and in an investigation undertaken by hundreds, it is impossible that the sense of individual responsibility should not be seriously diminished. The greatest possible care will be necessary on the part of the committee in analyzing the reports they receive, and in estimating their value.

THE NEW SURGEON-GENERAL OF MAINE.—DR. AUGUSTUS C. HAMLIN, of Bangor, Me., who has lately been appointed surgeon-general of Maine, on the staff of Governor Robie, is one of the prominent physicians of New England. He served in the army during the entire war, being intrusted with many important commands. He was afterwards promoted to be medical director in the regular army and in the army of West Virginia.

THE HAMMOND PRIZE.—The American Neurological Association offers a prize of $500, to be known as the "Wm. A. Hammond Prize," and to be awarded at the meeting in June, 1884, to the author of the best essay on the *Functions of the Thalamus in Man.*

The prize is open to competitors of all nationalities. Essays are to be sent to Dr. E. C. Seguin, 41 W. 20th Street, New York, on or before February 1, 1884.

DR. BILLINGS will deliver a lecture this evening on "Germs and Epidemics," in the Free Saturday Lecture Course, under the auspices of the Biological and Anthropological Society of Washington, D. C.

THE second session of the German "*Kongress für innere Medicin*" will be held in Wiesbaden, from April 17 to 20, under the presidency of Prof. Frerichs.

ABSENCE OF SPLEEN.—PROF. SCHENTHAUER, according to the *Medical Times and Gazette*, recently found at an autopsy of a woman aged seventy that no spleen existed. The organ had not been destroyed by disease, but was congenitally absent.

SMALLPOX STATISTICS FROM PITTSBURG, PA.—From the annual report of the Registrar of Pittsburg, Pa., for 1882, we extract the following figures concerning smallpox. During the year there were 1136 cases, 300 of which proved fatal. Of the 300 deaths, 235 occurred during the first or winter quarter, 46 during the second quarter, 3 during the third, and 16 during the fourth quarter.

In the municipal hospital, 313 cases were treated. Of these 124 were of unvaccinated persons, and 189 of those who had been previously vaccinated; of the latter 26 died, equal to 13.76 per cent.; of the former 61 died, equal to 49.19 per cent.; of the 26 post-vaccinal deaths 17 or 65.4 per cent. exhibited one vaccine scar, 6 or 23.1 per cent. exhibited two scars, and 3 or 11.5 per cent. showed three scars. The ages of those who died from smallpox after vaccination were: from 15 to 20 years, 2 persons; from 20 to 30 years, 10; from 30 to 40, 8; and from 40 to 50, 6 persons,

WINTER CHOLERA.—The disease to which this significant name has been applied appears to be coming into notice at the present time. In the health bulletins for the week ending January 27, we meet with it in two large sections of the country. The Michigan report states that one of the health officers reports "many cases of winter cholera, which comes on very suddenly and is severe;" and Dr. Bryce, Secretary of the Ontario Board of Health, speaks of it as follows: "Among the peculiar features of this extremely cold week, is the fact that in District IV., whence are reported over seven hundred cases of disease, diarrhœa not only becomes one of the six most prevalent diseases, but it amounts to five per cent. of all the diseases reported. Extreme cold as well as extreme heat would seem to have the same tendency; but while we must suppose that the former acts by producing internal congestions, the latter induces the disorder by the irritative effects of fermentative changes."

250 cases are reported at Waterbury, Conn., and the disease is thought to be due to the snow-water in the city reservoirs.

THE HOMŒOPATHS AND THE NEW YORK CODE.—At the annual meeting of the Homœopathic Medical Society of the State of New York, held at Albany last Tuesday, the President, Dr. John J. Mitchell, delivered an address which is interesting reading just now, and from it we make the following extracts:

"We had thought the battle for Homœopathy won. We were content, perfectly. Our schools were increasing, and our numbers never so large. Hospitals, dispensaries, and insane asylums were coming under our control in numbers rather greater than our professional corps could thoroughly man. As to success in our practice, we had presented statistics until we are tired, all demonstrating to the unprejudiced student that in the great mass of curable diseases our mortality was scarcely one-half that of our professional brethren of the 'Regular' school. The wealth and intelligence of the land saw our success, and to a wonderful extent had become our patrons. Necessity had produced us specialists in almost every department of medical science; and as to consultations, we were in the state of the milkmaid in the nursery rhyme, who replied:

"'Nobody asked you, sir!' she said."

. . . . . .

"But amid all this prosperity and peace, without our knowledge, and certainly not in obedience to any request of ours, a clause was incorporated in the Code of Ethics of the Medical Society of the State of New York to the effect that 'Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine.' . . . .

"This change of position met the hearty approval of the public, and the members of the Society were applauded for the noble, consistent position they had assumed.

"We, as homœopathists, were of course pleased that our 'regular' brethren had finally taken their stand upon the platform of freedom of medical action, upon which we had been for nearly a score of years. . . . .

"In regard to the resolution offered by the 'regulars' last year, we would state we did not directly or indirectly ask any such action. The resolution having been adopted, we hailed it as a good omen. Not that we thought the 'regulars' were becoming homœopaths, but that war might cease. We knew that we could do them good in the department of the practice of medicine to which for half a century we had specially devoted ourselves. And then they could be of service to us in the various departments of surgery, pathology, hygiene, and climatology, which we had more or less delegated to them. Any response on our part was not necessary, for they were merely coming to the position that we had occupied for a score of years. . . . .

"We are then to continue as a school of medicine, distinctively liberal in its character, ever holding out hands of welcome to any one educated to the level we have fixed; yes, refusing no one, provided he be lawfully educated as a physician, and honorable and true. . . . .

"In the triumph of the cause I advocate to-night all party lines shall be broken. Then the banners of the 'Eclectics,' of the 'Regulars,' and of the 'Homœopathists,' shall be lowered, in order that—the party watchwords having been erased—the noble legend of 'Scientific Medicine' may be emblazoned thereupon."

ADDITIONAL FRUITS OF THE NEW CODE.—A bill was introduced in the New York Assembly, last week, by Mr. Quinn, which provides that the right of every citizen and of the people to employ for medical purposes the services of any individual in whom he or she may have confidence, whether such employé has or has not a medical diploma, or has or has not registered as a physician, shall not be questioned in the State of New York. No such employé shall be liable to fine or imprisonment for rendering such service, where guiltless of any false representation in connection therewith, provided that nothing in this Act shall be so construed at to exempt from liability any such employé on account of damage resulting from malpractice, misconduct, or intoxication, either at common law or in pursuance of any statutory provision of this State.

PORRO'S OPERATION.—PROF. CARL BRAUN has performed Porro's operation in Vienna nine times. In eight cases the pedicles were treated by the extra-peritoneal method, and five recoveries were recorded. These five women are living now in Vienna, and are exhibited annually at the clinic. The ligatures in Prof. Braun's last case were of strong silk, prepared antiseptically, and were most carefully applied.—*Brit. Med. Journal*, January 6, 1883.

At a late meeting of the Obstetrical Society of London, DR. HEYWOOD SMITH exhibited a uterus removed by Porro's operation. The patient was aged twenty, the conjugate diameter of whose pelvis was an inch and three-quarters or less. She had been in labor two days, and attempts at delivery by craniotomy and cephalotripsy had been made without success. The performance of Porro's operation occupied nearly an hour. The specimen showed clearly the rugæ on its peritoneal surface.

The case died on the fourth day. The wound had perfectly healed, there was scarcely any trace of peritonitis, there was no fluid in the peritoneal cavity, and the tongue remained clean and moist to the last. There was, however, some incipient sloughing of the vagina, which he considered due partly to the length of time the patient was allowed to be in labor, and partly to the attempt, though it was not prolonged, at extraction with instruments in a case that was enfeebled by struma.

REVERSED HEREDITY.—Mlle. Bernard, the daughter of Claude Bernard, has just been fined one franc by the police tribunal of Boulogne-sur-Seine, on complaint of her neighbors, for converting her entire courtyard, garden, parlor, and even her bed-room, into an immense kennel for the care of destitute dogs. She felt that some reparation was due the canine race for the miseries inflicted on it by her father's vivisections.—*Revue de Thérap.*, November 1, 1882.

HEALTH OF PROF. OWEN.—*The Lancet* states that the health of PROF. OWEN is such as to cause great anxiety to his many friends.

GERMAN MALEVOLENCE.—The feeling in France towards Germany is well expressed by the following note published under the above caption in the *Journal Médicale de Paris* for November 4, 1882: "The celebrated German surgeon, Esmarch, the same who, by marrying a Princess of Schleswig-Holstein, became the uncle by marriage of the grandson of the Emperor William, has just published a brochure in which he attributes the death of the late President Garfield solely to the irrational treatment to which he was subjected by his physicians. The ball fired by Guiteau struck no essentially mortal organ, and the unjustifiable attempts to extract the ball, the employment of insufficiently and obsolete antiseptic dressings caused such a degree of prostration that a slight hemorrhage was sufficient to cause death.

"The account which we published of the autopsy of the unfortunate President shows that the views of Esmarch are as malevolent as erroneous. It seems useless to us to defend our American *confrères* who

showed under such circumstances as much practical science as professional devotion."

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending February 3, 1883, indicate that intermittent fever, measles, and rheumatism have increased, and that diphtheria, tonsillitis, and diarrhœa have decreased in area of prevalence.

Compared with the average for the month of January in the preceding six years, neuralgia, tonsillitis, and measles were more prevalent, and remittent fever, whooping-cough, and diphtheria, less prevalent during the month of January, 1883.

Including reports by regular observers and by others, diphtheria was reported present during the week ending February 3, and since, at 19 places, scarlet fever at 18 places, and measles at 17 places. Smallpox was reported at St. Joseph, Berrien County, February 3.

NOTES AND QUERIES.

PAY THE DOCTOR'S BILLS.

ON a blank account for professional services rendered, we find the following printed on the margin:

"Tres medicas facies habet; unam quando ragatur,
Angelicam; mox est, cum juvat, ipse Deus.
Post ubi curato, poscit sua præmia, morbo,
Horridus apparet, terribilisque Sathan."

Enricus Cordus.

"Three faces wears the doctor; when first sought,
An angel's—and a God's, the cure half wrought;
But, when that cure complete he seeks his fee,
Satan vile looks then less terrible than he."

THE DOCTOR'S DREAM.

AM sitting alone, by the surgery fire, with my pipe alight, now the day is done:
The village is quiet, the wife's asleep, the child is hush'd, and the clock strikes One!
And I think to myself, as I read THE NEWS, and bless my life for the peace upstairs,
That the burden's sore for the best of men, but few can dream what a Doctor bears;
For here I sit at the close of a day, whilst others have counted their profit and gain,
And I've tried as much as a man can do, in my humble manner, to soften pain:
I've warned them all, in a learned way, of careful diet, and talked of tone.
And when I have preached of regular meals, I've scarcely had time to swallow my own.
I was waked last night in my first long sleep, when I crawled to bed from my rounds dead beat,
"Ah, the Doctor's called!" and they turned and snored, as my trap went rattling down the street!

I sowed my oats, pretty wild they were, in the regular manner when life was free,
For a Medical Student isn't a Saint, any more than your orthodox Pharisee!
I suppose I did what others have done, since the whirligig round of folly began,
And the ignorant pleasures I loved as a boy—I have pretty well cursed since I came to be man.
But still I recall through the mist of years and through the portals of memory steal
The kindly voice of a dear old man who talked to us lads of the men who heal,
Of the splendid mission in life for those who study the science that comes from God,
Who buckle the armor of Nature on, who bare their breast and who kiss the rod.
So the boy disappeared in the faith of the man, and the oats were sowed, but I never forgot
There were few better things in the world to do than to lose all self in the Doctor's lot.
So I left the life that had seemed so dear, to earn a crust that isn't so cheap,
And I bought a share of a practice here, to win my way, and to lose my sleep;
To be day and night at the beck and call of men who ail, and women who lie;
To know how often the rascals live, and see with sorrow the dear ones die;
To be laughed to scorn as a man who fails, when Nature pays her terrible debt;
To give a mother her first-born's smile, and leave the eyes of the husband wet;
To face and brave the gossip and stuff that travels about through a country town;
To be thrown in the way of hysterical girls, and live all terrible scandals down;
To study at night in the papers here of new disease and of human ills;
To work like a slave for a weary year, and then to be cursed when I sent my bills!

Upon my honor, we're not too hard on those who cannot afford to pay,
For nothing I've cured the widow and child: for nothing I've watched till the night turned day;
I've earned the prayers of the poor, thank God, and I've borne the sneers of the pampered beast,
I've heard confessions and kept them safe as a sacred trust like a righteous priest.
To do my duty I never have sworn, as others must do in this world of woe,
But I've driven away to the bed of pain, through days of rain and through nights of snow.

. . . . . .

As here I sit and I smoke my pipe, when the day is done and the wife's asleep,
I think of that brother-in-arms who's gone, and utter—well, something loud and deep!
And I read THE NEWS and I fling it down, and I fancy I hear in the night that scream
Of a woman who's crying for vengeance! Hark! No, the house is still! It's a Doctor's Dream! [*Punch*, Jan. 20, '83.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 5 TO FEBRUARY 12, 1883.

TOWN, FRANCIS L., *Major and Surgeon.*—Is relieved from duty at Fort Walla Walla, and will report to the commanding officer, Vancouver Barracks, for duty as Post Surgeon.—*S. O. 7, Department of the Columbia, January 27*, 1883.

WOODWARD, J. J., *Major and Surgeon.*—The extension of leave of absence on account of sickness granted October 6, 1882, is further extended six months on account of sickness.—*Par. 9, S. O. 34, A. G. O., February 9*, 1883.

DE LOFFRE, AUGUSTUS A., *Captain and Assistant Surgeon.*—Relieved from further duty in this Department.—*S. O. 28, Department of the Missouri, February 5*, 1883.

TAYLOR, MARCUS E., *Captain and Assistant Surgeon.*—So much of S. O. 20, A. G. O., January 24, 1883, as directs him to report in person to the commanding general, Department of the East, is amended to direct him to report in person to the commanding officer, David's Island, New York Harbor, for duty at that station.—*Par. 2, S. O. 33, A. G. O., February 8*, 1883.

TAYLOR, B. D., *Captain and Assistant Surgeon.*—Granted leave of absence for one month, on surgeon's certificate of disability.—*Par. 2, S. O. 13, Department of Texas, Feb. 1*, 1883.

NEWTON, R. C., *First Lieutenant and Assistant Surgeon.*—Is relieved from duty at Fort Cummings, New Mexico, and will proceed to Fort Sill, Indian Territory, and report to the commanding officer for duty.—*S. O. 28, Department of the Missouri, February 5*, 1883.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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